



CONNECTICUT
CLEAN ENERGY FUND

FY 2009 – FY 2010

(July 1, 2008, through June 30, 2010)

COMPREHENSIVE PLAN

Submitted by:

**The Connecticut Clean Energy Fund
Board of Directors**

Docket No. 08-04-XX

March 31, 2008

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Overview

In accordance with the General Statutes of Connecticut (Conn. Gen. Stat.) § 16-245n(d), the Board of Directors of the Connecticut Clean Energy Fund (“CCEF Board”) respectfully submits this comprehensive plan for the implementation of renewable energy programs and expenditures during the July 1, 2008, through June 30, 2010, period (“FY 2009 – FY 2010 Comprehensive Plan”).¹ As required by the statute, the FY 2009 – 2010 Comprehensive Plan consists of programs and initiatives designed to foster the growth, development and commercialization of renewable energy sources and related enterprises, and stimulate demand for renewable energy and the deployment of renewable energy sources, which will serve the end-use customers in the state. By statute, the FY 2009 – FY 2010 Comprehensive Plan is also required to give preference to those projects that maximize the reduction of Federally Mandated Congestion Charges (“FMCCs”) in the state. The CCEF Board voted unanimously to approve this FY 2009 – FY 2010 Comprehensive Plan at its regular board meeting on March 31, 2008.

Connecticut Clean Energy Fund Board

The newly constituted Renewable Energy Investment Board (also known as the Connecticut Clean Energy Fund Board, or CCEF Board) was created in 2007 pursuant to Section 1 of Public Act 07-152, and codified in Conn. Gen. Stat. § 16-245n, and is authorized to act on matters relating to the Connecticut Clean Energy Fund (“CCEF”). Pursuant to Conn. Gen. Stat. § 16-245n(e), the CCEF Board membership is statutory and consists of fifteen (15) individuals with knowledge and experience in matters related to the purpose and activities of the CCEF as follows: (1) one person with expertise regarding renewable energy resources appointed by the speaker of the House of Representatives; (2) one person representing a state or regional organization primarily concerned with environmental protection appointed by the president pro tempore of the Senate; (3) one person with experience in business or commercial investments appointed by the majority leader of the House of Representatives; (4) one person representing a state or regional organization primarily concerned with environmental protection appointed by the majority leader of the Senate; (5) one person with experience in business or commercial investments appointed by the minority leader of the House of Representatives; (6) the Commissioner of Emergency Management and Homeland Security or the Commissioner's designee; (7) one person with expertise regarding renewable energy resources appointed by

¹ The Comprehensive Plan conforms to the CCEF fiscal year, which runs from July 1 through June 30.

the Governor; (8) two persons with experience in business or commercial investments appointed by the board of directors of Connecticut Innovations, Incorporated; (9) a representative of a statewide business association, manufacturing association or chamber of commerce appointed by the minority leader of the Senate; (10) the Consumer Counsel from the Office of Consumer Counsel; (11) the Secretary of the Office of Policy and Management or the Secretary's designee; (12) the Commissioner of Environmental Protection or the Commissioner's designee; (13) a representative of organized labor appointed by the Governor; and (14) a representative of low-income customers appointed by the Governor.

Connecticut Clean Energy Fund Operations

The Renewable Energy Investment Fund (also known as the Connecticut Clean Energy Fund, or the CCEF) was created pursuant to Public Act 98-28, amended by Public Act 07-152 and Public Act Public Act 07-242, and codified in Conn. Gen. Stat. § 16-245n. Pursuant to Conn. Gen. Stat. § 16-245n(c), the CCEF's charge is to “foster the growth, development and commercialization of renewable energy sources and related enterprises, and stimulate demand for renewable energy and the deployment of renewable energy sources that serve end-use customers in the state and for the further purpose of supporting operational demonstration projects for advanced technologies that reduce energy use from traditional sources.”

Such expenditures may include grants, direct or equity investments, contracts or other actions that support research, development, manufacture, commercialization, deployment and installation of renewable energy technologies, and actions that expand the expertise of individuals, businesses and lending institutions with regard to renewable energy technologies.

The CCEF receives its funding for programs and initiatives from the ratepayers of the electric distribution companies² through a surcharge on their bills that is authorized by the Department of Public Utility Control (“Department”) of not less than one mill per kilowatt hour. The CCEF may also receive funding through a penalty, sometimes referred to as the Alternative Compliance Payment, or ACP, assessed on licensed load-serving entities and the electric distribution companies for not meeting the requirements under the state's Renewable Portfolio Standard (“RPS”). The CCEF may also receive funding from other sources such as state bonding, and state and federal grants when available.

² The electric distribution companies are The Connecticut Light and Power Company and The United Illuminating Company.

Under Conn. Gen. Stat. § 16-245n(a) those renewable technologies and sources eligible to receive CCEF incentives include “solar photovoltaic energy, solar thermal, geothermal energy, wind, ocean thermal energy, wave or tidal energy, fuel cells, landfill gas, hydropower that meets the low-impact standards of the Low-Impact Hydropower Institute, hydrogen production and hydrogen conversion technologies, low emission advanced biomass conversion technologies, alternative fuels, used for electricity generation including ethanol, biodiesel or other fuel produced in Connecticut and derived from agricultural produce, food waste or waste vegetable oil, provided the Commissioner of Environmental Protection determines that such fuels provide net reductions in greenhouse gas emissions and fossil fuel consumption, usable electricity from combined heat and power systems with waste heat recovery systems, thermal storage systems and other energy resources and emerging technologies which have significant potential for commercialization and which do not involve the combustion of coal, petroleum or petroleum products, municipal solid waste or nuclear fission.”

CCEF’s Mission and Vision

The CCEF’s vision is that:

Connecticut will lead the nation in attaining a sustainable balance of energy production, economic growth and environmental impact.

The CCEF’s mission is to:

Promote, develop, and invest in clean energy sources for the benefit of Connecticut ratepayers.

To this end, the CCEF Board strongly believes that the installed renewable energy capacity programs under Program Goal 1, emerging renewable energy technology programs under Program Goal 2, and renewable energy public awareness and sustainability programs under Program Goal 3, as well as those programs under development, are consistent with the vision and well designed to achieve the CCEF mission. A detailed description of all of the CCEF’s programs under Program Goal 1, Program Goal 2, and Program Goal 3 is provided in this FY 2009 – FY 2010 Comprehensive Plan.

Connecticut Clean Energy Fund Program History

Through the CCEF's implementation of its 2004 – 2007 Strategic Focus,³ the impacts of the CCEF's programs and initiatives have been felt in nearly every community across Connecticut. In fact, more than 78 percent of all Connecticut towns have received some amount of funding from CCEF programs. Moreover, CCEF funding has made possible the installation of hundreds of renewable energy generation systems, boosted the number of individuals and organizations buying clean energy, and supported the development of new and cutting-edge renewable energy technologies across the state.

To date, the CCEF has received approximately \$157 million of ratepayer funds, of which \$56 million has been deployed into projects, initiatives and investments, \$43 million has been committed for approved projects in the process of being permitted and constructed, and \$68 million has been allocated to existing CCEF programs. A status update of the CCEF's larger project-driven initiatives through February 29, 2008, is described below along with a listing of the actual projects receiving funding from the CCEF.

On-Site Renewable Distributed Generation

As the Department is aware, distributed generation ("DG") is vitally important to the state to bring generation to where it is needed, while at the same time helping to alleviate the state's distribution and transmission congestion problems, and reducing FMCCs. To this end, through the CCEF's successful On-Site Renewable DG Program, the CCEF has made possible 83 renewable DG energy systems in key areas of the state, including Southwestern Connecticut. These DG systems include fuel cell systems, solar photovoltaic systems and biomass systems that have been installed or are in the process of being installed. It is worth noting that the \$58,319,253 of CCEF ratepayer funding for all on-site DG projects has attracted \$45,884,963 in private funds to make the projects a reality. **Table A** provides a list of all the CCEF-approved, completed and pending on-site renewable DG energy systems through February 29, 2008.

³ Now referred to as a "Comprehensive Plan."

Table A:

On-Site Renewable Distributed Generation Projects Constructed and Operational through 2/29/2008						
PROJECT NAME	TECHNOLOGY	LOCATION	KW	CCEF FUNDING AMOUNT	EXPECTED ANNUAL GENERATION (kWh)	EXPECTED LIFETIME GENERATION (MWh)
Barnard Environmental Magnet School	PV	New Haven	72.4	\$ 361,940	76,107	1,522
Barrett Outdoor Communications	PV	West Haven	17.3	76,000	18,175	364
Beckett Veterinary Services	PV	Glastonbury	9.9	41,935	10,386	208
BJ's Wholesale	PV	Derby	82.8	371,000	87,039	1,741
BJ's Wholesale	PV	Willimantic	82.8	371,000	87,039	1,741
Centerbrook Architects	PV	Centerbrook	16.5	74,550	17,345	347
Chrisholm Marina, Inc.	PV	Chester	12.4	53,658	13,035	261
CT DOT	PV	Hartford	23.1	140,000	24,283	486
Fairfield WPCA	Fuel Cell	Fairfield	200.0	880,000	1,576,800	15,768
Flamig Farm	PV	West Simsbury	11.4	52,514	11,958	239
General Electric Company	PV	Fairfield	168.0	692,052	176,602	3,532
Kleban Holding Co.	PV	Fairfield	5.5	26,075	5,782	116
Mainstream/Centerbrook II	PV	Centerbrook	26.5	98,392	27,799	556
Pepperidge Farms	Fuel Cell	Bloomfield	250.0	1,000,000	1,971,000	19,710
R.C. Bigelow Company	PV	Fairfield	193.6	799,100	203,512	4,070
Salmon Brook Center	PV	Granby	3.0	10,000	3,154	63
Select Seeds	PV	Union	15.8	66,576	16,556	331
SolarWrights/Pine Point School	PV	Stonington	72.8	285,071	76,527	1,531
South Windsor High School	Fuel Cell	South Windsor	200.0	1,750,000	1,576,800	15,768
St Francis Hospital	Fuel Cell	Hartford	200.0	1,837,000	1,576,800	15,768
Stamford Recl. Center	PV	Stamford	7.5	32,000	7,884	158
Staples - Killingly	PV	Dayville	433.7	1,700,419	455,905	9,118
Talcott Mountain Science Center A	PV	West Hartford	9.5	42,000	9,934	199
Talcott Mountain Science Center B	PV	West Hartford	11.6	52,000	12,141	243
Tibbetts Real Estate	PV	Darien	7.1	33,090	7,474	149
United Natural Foods	PV	Dayville	480.0	1,913,217	504,608	10,092
University of Hartford A	PV	Hartford	17.0	83,250	17,881	358
Westport Fire Station	PV	Westport	23.1	99,156	24,304	486
Westport Playhouse	PV	Westport	8.6	43,000	9,082	182
Whole Foods - Cheshire	PV	Cheshire	125.0	516,223	131,400	2,628
WPCA	Fuel Cell	New Haven	200.0	1,470,000	1,576,800	15,768
Yale-Fisher Hall	PV	New Haven	40.3	187,298	42,353	847
Yale-Peabody	Fuel Cell	New Haven	250.0	1,250,000	1,971,000	19,710
Total Completed	33		3,277.1	\$ 16,408,516	12,327,465	144,060

Projects Approved for Funding and In Progress through 2/29/2008 ⁴						
PROJECT NAME	TECHNOLOGY	LOCATION	KW	CCEF FUNDING AMOUNT	EXPECTED ANNUAL GENERATION (kWh)	EXPECTED LIFETIME GENERATION (MWh)
2001 Company	PV	Waterbury	16.3	\$ 67,980	17,156	343
Aqua Turf	PV	Southington	228.5	960,710	240,178	4,804
Baron - Dentist Office	PV	North Branford	4.9	22,521	5,172	103
Chase Collegiate School	PV	Waterbury	63.2	275,795	66,446	1,329
CNC Software Company	PV	Tolland	72.0	339,660	75,686	1,514
Crystal Rock Company	PV	Watertown	299.9	1,287,677	315,234	6,305
Daymon Worldwide	PV	Stamford	396.0	1,543,062	416,275	8,326
Dove and Boar Farm	PV	Hampton	15.6	65,932	16,399	328
Essex Meadows Properties Inc	PV	Essex	108.0	459,719	113,530	2,271
Fairfield Water Pollution Control	PV	Fairfield	34.0	148,500	35,741	715
Farmington Office Associates	PV	Farmington	28.6	116,388	30,022	600
Great Pasture Road	PV	Danbury	420.8	1,247,707	442,292	8,846
Greenwich Academy	PV	Greenwich	29.0	125,118	30,527	611
Greylodge Farm, LLC	PV	Roxbury	6.3	29,055	6,623	132
Hartford Life Insurance (Hybrid)	PV	Windsor	202.0	805,000	212,342	4,247
Hartford Life Insurance (Hybrid)	Fuel Cell	Windsor	300.0	1,250,000	2,365,200	23,652
Harvey Waterford	PV	Waterford	63.0	274,004	66,226	1,325
iPark - 761 Main Avenue	PV	Norwalk	68.0	288,875	71,524	1,430
Kaestle Boos Associates	PV	New Britain	34.9	157,212	36,634	733
Kohl's Dept Stores - #640	PV	Rocky Hill	316.8	1,223,200	333,020	6,660
Kohl's Dept Stores - #968	PV	Orange	316.8	1,198,600	333,020	6,660
Kohl's Dept Stores - #503	PV	Manchester	319.7	1,207,200	336,048	6,721
Lee Company	PV	Westbrook	308.0	1,180,000	323,770	6,475
Mansfield Community Center	PV	Mansfield	98.0	405,079	103,018	2,060
Middlebury Animal Hospital	PV	Middlebury	11.5	51,200	12,068	241
Middletown High School	Fuel Cell	Middletown	200.0	940,000	1,576,800	15,768
Mill Pond Village	PV	Broad Brook	264.2	1,247,717	277,727	5,555
New Britain High School	PV	New Britain	275.3	1,264,895	289,395	5,788
New Canaan Country School	PV	New Canaan	27.6	119,425	29,045	581
Pepperidge Farms	Fuel Cell	Bloomfield	1,200.0	3,507,500	9,460,800	94,608
Pilgrim Furniture	PV	Orange	341.6	1,422,000	359,090	7,182
Plainville High School	PV	Plainville	172.6	763,736	181,446	3,629
Planet Self Storage	PV	Newington	27.7	128,100	29,139	583
Portland CEC Valley View School	PV	Portland	5.0	21,893	5,298	106
Pratt & Whitney	PV	Middletown	556.8	2,118,736	585,308	11,706
Precision Plastic Products	PV	Portland	83.0	359,765	87,208	1,744
Rolling Ridge	PV	West Haven	138.5	687,413	145,591	2,912
S & D Farm	Wind	Lisbon	50.0	82,250	131,400	1,971
School House	PV	Waterbury	164.8	781,005	173,238	3,465
Summit - Middletown	PV	Middletown	1.6	6,840	1,724	34
Sunset Ridge	PV	New Haven	101.5	485,465	107,586	2,152
Thule Distribution Center	PV	Seymour	318.0	1,253,260	334,282	6,686
Ticket Software	PV	Vernon	30.8	134,330	32,377	648
Tylaska Marine Hardware	PV	Mystic	17.8	70,900	18,732	375
University of Hartford B	PV	Hartford	1.7	7,000	1,734	35
Westport Wash & Wax	PV	Westport	3.7	17,673	3,879	78

⁴ Total projects include four projects approved in March 2008.

PROJECT NAME	TECHNOLOGY	LOCATION	KW	CCEF FUNDING AMOUNT	EXPECTED ANNUAL GENERATION (kWh)	EXPECTED LIFETIME GENERATION (MWh)
Whole Foods Market	Fuel Cell	Glastonbury	200.0	940,000	1,576,800	15,768
Whole Foods Market	PV	West Hartford	107.0	411,500	112,478	2,250
Williams-Mystic Marine Center	PV	Mystic	17.2	74,450	18,081	362
Yale School of Forestry	PV	New Haven	107.9	469,320	113,393	2,268
Total In Progress	50		8,176.0	32,045,367	21,656,702	282,685
Grand Total On-Site DG	83		11,453.1	\$ 48,453,883	33,984,167	426,745

In addition to the energy and capacity benefits, other system and environmental benefits that the above renewable projects provide the state include:

Generating Energy Equivalent to the Needs of 4,046 Homes @700 kWh/month

Lifetime Avoided FMCCs: \$2,816,244

Lifetime Avoided Emissions:	lbs	tons
CO ₂	213,387,833	106,694
CO	279,135	140
NO _x	810,014	405
SO ₂	63,152	32

Project 150 – Long-Term Renewable Electricity Purchase Agreements

Conn. Gen. Stat. § 16-244c(j)(2), amended by Section 124 of Public Act 07-242, requires the electric distribution companies to submit to the Department for its approval any long-term electricity purchase agreements (“EPA”) from Class I renewable energy source projects that receive funding from the CCEF. The statute requires that on or after October 1, 2007, and until September 30, 2008, such agreements must be composed of not less than a total of 125 MW, and on and after October 1, 2008, such agreements must be composed of not less than a total of 150 MW.

In its Decision dated October 20, 2004, in Docket No. 03-07-17, DPUC Review of Long-Term Contracts, the Department approved the process and the form of long-term contract for Project 100 – now Project 150, which is referred to as an Electricity Purchase Agreement (“EPA”). The October 20, 2004, Decision also created a three-step review and selection process in which the CCEF, the electric distribution companies and the Department each play a role. In Phase One, the CCEF performs the initial review and selection of proposed projects, determines project financial and technical viability and other costs/benefits related to the project, and allocates the CCEF grant amount and forwards projects to the electric distribution companies for their review.

In Phase Two, the electric distribution companies analyze the interconnection point and costs related thereto, reliability and other impacts of each project, and the financial impact on utility customers after the CCEF grant and evaluate the projects' costs and benefits. In Phase Three, after the electric distribution companies have performed and submitted a written review, the Department conducts a proceeding in which it decides whether to approve or reject proposed projects. The October 20, 2004, Decision in Docket No. 03-07-17, DPUC Review of Long-Term Contracts, provided that the CCEF shall conduct at least two rounds of solicitations.

The Round 1 solicitation concluded with the Department approving, on September 27, 2006, a 15 MW biomass project sponsored by Watertown Renewable Power (formerly known as Tamarack). Watertown Renewable and CL&P have executed an EPA. In May 2007, the CCEF provided Watertown Renewable with a \$50,000 CCEF grant.

The Round 2 solicitation concluded with the Department, on January 30, 2008, finding that all eleven (11) projects recommended by the CCEF in Phase One satisfied the seven (7) statutory requirements of Conn. Gen. Stat. § 16-244c(j)(2) ("January 30, 2008, Final Decision"). However, based on language of Conn. Gen. Stat. § 16-244c(j)(2), which requires the Department to give preference to projects that would provide a ratepayer benefit (or minimize ratepayer cost) or improve system reliability, the Department approved seven (7) of the 11 projects for a total of 109 MW.⁵ **Table B** provides a list of those projects that were recommended by the CCEF and subsequently approved by the Department in Rounds 1 and 2 of Project 150.

Table B:

Project 150 Approved Projects						
PROJECT NAME	TECHNOLOGY	LOCATION	MW	CCEF FUNDING AMOUNT	EXPECTED ANNUAL GENERATION (kWh)	EXPECTED LIFETIME GENERATION (MWh)
Clearview – Kofkoff Egg Farm	Biomass	Bozrah	30.0	\$ 4,000,000	219,175,200	4,383,504
Clearview – Laurelbrook Dairy	Biomass	Canaan	3.0	50,000	23,652,000	236,520
EMCOR – Stamford Hospital	Fuel Cell	Stamford	4.8	558,942	36,266,400	543,996
EMCOR – Waterbury Hospital	Fuel Cell	Waterbury	2.4	1,015,449	18,133,200	271,998
Plainfield Renewable Energy	Biomass	Plainfield	30.0	50,000	236,520,000	3,074,760
SCG Gate Station	Fuel Cell	Milford	9.0	50,000	62,283,600	934,254
SNEW Station	Other	Norwalk	30.0	50,000	228,636,000	4,115,448
Tamarack/GDI	Biomass	Watertown	15.0	50,000	118,260,000	2,365,200
Total Project 150	8		124.2	\$ 5,824,391	942,926,400	15,925,680

⁵ In the January 30, 2008, Final Decision, the Department also gave contingent approval to the Triangle Project, an eighth project, to address a shortfall of 20 MW or greater that may result from Clearview or any other project failing to obtain a financing commitment letter within 90 days of the Decision. If the Department finds that projects amounting to 20 MW or more fail to meet this obligation to provide the financial commitment letter, Triangle's contingent approval will become final.

In addition to the energy and capacity benefits, other system and environmental benefits that the above renewable projects provide the state include:

Generating Energy Equivalent to the Needs of 112,253 Homes @700 kWh/month

Lifetime Avoided FMCCs: \$105,109,488

Lifetime Avoided Emissions:	lbs	tons
CO₂	16,887,171,823	8,443,586
CO	-672,627	-336
NO_x	22,427,077	11,214
SO₂	-857,108	-429

In its January 30, 2008, Final Decision, the Department directed the CCEF to file a proposed schedule for a Round 3 solicitation to obtain the additional megawatts needed to comply with the 150 MW mandate. The January 30, 2008, Final Decision also directed the CCEF to collaborate with The Connecticut Light and Power Company and The United Illuminating Company to develop a compressed schedule designed to result in the submission of Round 3 project proposals to the Department on an expedited basis so that the Department can review and approve the additional projects by October 1, 2008. On February 29, 2008, the CCEF filed its proposed schedule for Round 3, as required by the Department's January 30, 2008, Final Decision, which was subsequently approved by the Department. On April 1, 2008, the CCEF released its Project 150 - Round 3 Request for Proposals for Class I Renewable Development Projects ("RFP") with a project proposal deadline of May 30, 2008. The Department has established Docket No. 08-03-03, [DPUC Review of Long-Term Renewable Contracts – Round 3 Results](#) for the purpose of reviewing and approving the Round 3 proposed project EPAs. The CCEF anticipates that the Round 3 solicitation will be completed, and the selected projects will have received EPAs approved by the Department, by the end of 2008.

Residential and Small Solar Photovoltaic (PV) Systems

Under the CCEF's successful Residential and Small Solar Photovoltaic (PV) System Rebate Program, rebates are offered through designated participating installers for Connecticut residents, nonprofits and governmental organizations that install solar PV systems of 10 kW or less on their homes or at their facilities. **Table C** summarizes the robust market response to the program as of February 29, 2008; the program to date has awarded rebates for 449 small solar systems.

Table C:

Small Solar through 2/29/2008						
PROJECT NAME	TECHNOLOGY	LOCATION	KW	CCEF FUNDING AMOUNT	EXPECTED ANNUAL GENERATION (kWh)	EXPECTED LIFETIME GENERATION (MWh)
Residential & Small Commercial Completed	PV	337 Systems Statewide	1,675.8	\$ 7,215,289	1,761,643	35,233
Residential & Small Commercial Approved for Funding and In Progress	PV	112 Systems Statewide	640.9	2,650,079	673,746	13,475
Total Small Solar	449		2,316.8	\$ 9,865,368	2,435,389	48,708

In addition to the energy and capacity benefits, other system and environmental benefits that the above renewable projects provide the state include:

Generating Energy Equivalent to the Needs of 290 Homes @ 700 kWh/month

Lifetime Avoided FMCCs: \$321,471

Lifetime Avoided Emissions:	lbs	tons
CO ₂	57,879,348	28,940
CO	33,072	17
NO _x	93,470	47
SO ₂	7,208	4

As explained in detail in the Program Goal 1 section of this FY 2009 – FY 2010 Comprehensive Plan, the CCEF intends to launch its Small System Lease Program, which is currently under development, with the goal of 1,000 solar homes by June 30, 2010. The lease program is designed to cover the after-rebate remaining cost of the solar system for low- and moderate-income households through the energy cost savings on the customer's bill. **Table D** provides a summary of the activities for all of the distributed generation installed capacity programs under Program Goal 1.

Table D:

PROGRAM GOAL 1 - SUMMARY ON-SITE INSTALLED CAPACITY ACTIVITIES through 2/29/08				
TECHNOLOGY	# PROJECTS	KW	PROJECT COST	CCEF FUNDING AMOUNT
On-Site Distributed Generation				
Fuel Cell	10	3,200.0	\$ 20,603,453	\$ 14,824,500
PV	72	8,203.1	63,379,676	33,547,133
Wind	1	50.0	199,006	82,250
Program Total	83	11,453.1	84,182,135	48,453,883
Small Solar				
PV	449	2,316.8	20,022,081	9,865,370
Program Total	449	2,316.8	20,022,081	9,865,370
Goal 1 Grand Total	532	13,769.9	\$ 104,204,216	\$ 58,319,253

In addition to the energy and capacity benefits, other system and environmental benefits that the above renewable projects provide the state include:

Generating Energy Equivalent to the Needs of 4,336 Homes @700 kWh/month

Lifetime Avoided FMCCs: \$3,137,715

Lifetime Avoided Emissions:	lbs	tons
CO ₂	271,267,181	135,634
CO	312,207	156
NO _x	903,484	452
SO ₂	70,360	35

Operational Demonstration Technologies

Under the CCEF's Operational Demonstration Program in the Program Goal 2 section of this FY 2009 – FY 2010 Comprehensive Plan, the CCEF makes funds available to pre-commercial stage clean energy projects that rely on the innovative use or application of renewable energy generation technologies. The funding may be used to demonstrate the commercial viability and economic benefits of innovative or new technology applications including fuel cells, wind, solar, wave and tidal energy, ocean thermal energy, biomass, landfill gas, certain types of hydropower or other technologies eligible for CCEF funding. Additionally, hydrogen generation and storage technologies will be considered. The Operational Demonstration Program is not intended to support Research & Development or alpha-stage projects. The Operational Demonstration Program is explained in detail in the Program Goal 2 section of this FY 2009 – FY 2010 Comprehensive Plan. **Table E** provides the results of the Operational Demonstration Program as of February 29, 2008.

Table E:

Operational Demonstration Projects Constructed and Operational through 2/29/2008				
PROJECT NAME	TECHNOLOGY	LOCATION	CCEF FUNDING AMOUNT	PURPOSE OF DEMONSTRATION
Fuel Cell Energy/UConn	Fuel Cell	Storrs	\$ 630,016	Feasibility of reliable co-production of hydrogen from high-temperature fuel cells for production of clean distributed electric power
GenCell Demonstration at UConn	Fuel Cell	Storrs	468,000	Demonstrate operational performance and commercial readiness of GenCell's prototype 40 kW Molten Carbonate fuel cell
Infinity Demonstration at Schlumberger	Fuel Cell	Ridgefield	424,700	Demonstrate feasibility of smart modular regenerative fuel cell powered by multiple sources including renewables
Proton Mohegan Sun	Fuel Cell	Uncasville	417,955	Assess operating characteristics of a Regenerative Fuel Cell backup power system in a relevant environment (Mohegan Energy, Environment, Economics, Education Center)
Proton SBC	Fuel Cell	Trumbull	890,000	Assess peak shaving effectiveness of a Regenerative Fuel Cell backup power system at a telecommunications site
Proton Wallingford Electric Department	Fuel Cell	Wallingford	485,234	Demonstrate advantage of a regenerative fuel cell as backup power system at an electric substation
Ztek Demonstration at Dinosaur State Park	Fuel Cell	Rocky Hill	560,000	Demonstrate Operation of Planar Solid Oxide Fuel Cell at Dinosaur State Park providing supplemental power, heat and air conditioning to the facility
Total Completed	7		\$ 3,875,905	

Approved for Funding and In Progress through 2/29/2008				
PROJECT NAME	TECHNOLOGY	LOCATION	CCEF FUNDING AMOUNT	PURPOSE OF DEMONSTRATION
Rentricity	Other	Stamford	\$ 50,000	Feasibility of utilizing excess dissipated pressure in municipal water systems to generate electricity
Tallon Lumber Sawmill	Biomass	North Canaan	2,500,000	Commercial viability of a small-scale biomass gasification system at a lumber sawmill
Windham Automated Machines	Hydro	Mansfield	557,134	Demonstrate unique efficient small modular hydro-turbines for run of river applications
Total In Progress	3		3,107,134	
Grand Total Operational Demonstration	10		\$ 6,983,039	

Communities-Based Programs

The CCEF has developed a series of programs that not only have raised awareness of the benefits and availability of clean renewable energy but also have accelerated the growth of the voluntary clean energy market in Connecticut. Many of these program incentives are interrelated, leading to a rapidly expanding network of clean energy communities in the state.

The **Connecticut Clean Energy Communities Program – Version 2.0** is an award-winning program that challenges municipal governments, businesses, institutions and households to support clean energy. Under this program, communities can earn solar photovoltaic systems for municipal buildings, such as schools, by meeting three steps:

- (1) committing to the 20% by 2010 clean energy campaign,
- (2) obtaining a specified number of sign-ups for the CTCleanEnergyOptionssm program and
- (3) making a municipal clean energy purchase.

This program has demonstrated significantly improved performance of residential markets through the CTCleanEnergyOptionssm program (according to an independent evaluator, household participation in participating communities outpaces participation in all other communities by a rate of nearly 3 to 1) and commercial markets through municipal purchases under the 20% by 2010 clean energy campaign. To date, more than 40 percent of Connecticut's cities and towns have committed themselves to clean energy, working toward energy independence and reducing greenhouse gas emissions that contribute to global warming. As a reward for their leadership on these vital issues, those communities have earned nearly 160 kilowatts of solar PV systems from the CCEF.

The **Community Innovations Grants Program** is a test-pilot program that provides eligible communities with block grants to support local public awareness and education projects that support clean renewable energy. Under this program, the CCEF provided grants of \$5,000 for up to 40 towns that committed to the 20% by 2010 clean energy campaign. The clean energy task forces in those communities are allowed to fund projects proposed by organizations and individuals to raise awareness of clean energy and encourage support at the local level. Examples of successful projects include a combined energy efficiency–renewable marketing campaign, educational workshops, materials for town libraries and civic meetings, and funding for a high school team participating in a statewide climate change competition.

The **High Performance Schools Program** is a multiple-year program that seeks to transform the way public school buildings are designed and constructed in Connecticut. The program includes a portfolio of initiatives intended to promote education and outreach on the benefits of high performance schools to municipalities and school facilities and provide technical support in targeted communities. Ultimately, the CCEF anticipates that this program will accelerate the adoption of green building standards among all sectors in Connecticut, with an emphasis on achieving greater energy efficiency and incorporating renewable energy technologies.

Learning for Clean Energy Innovation Program is a professional development opportunity for Connecticut teachers focused on renewable energy sources. Developed through a collaborative process with education and energy experts, this program, which is available to towns participating in the 20% by 2010 campaign, will provide enhanced solar education lessons that are aligned with the ninth-grade Connecticut Core Science Curriculum Framework. Subsequent phases of this program will offer education on wind energy and hydrogen fuel cells.

Table F is a listing of the Connecticut municipalities voluntarily opting to participate in the CCEF's various community-based programs as of February 29, 2008, along with those municipalities earning solar PV systems on municipal buildings.

Table F:

PROGRAM GOAL 3 SUMMARY: MUNICIPAL VOLUNTARY PARTICIPATION											
Municipality	20% by 2010	Clean Energy Community	Community Innovations Grants	Total Sign ups	Total Earned Solar PV Systems	Municipality	20% by 2010	Clean Energy Community	Community Innovations Grants	Total Sign ups	Total Earned Solar PV Systems
Berlin	Jul-07			46	-	New Britain	Feb-05	Dec-07	Oct-06	115	1
Bethany	Aug-05	Nov-06	Aug-06	247	15	New Haven	Feb-04	Jun-05		980	20
Bloomfield	Jan-07		Feb-07	96.5	-	New London	May-07			72	-
Branford	Mar-06	Apr-06	Jun-07	358.5	7	Newington	Mar-07		Oct-07	104.5	-
Bridgeport	Dec-07	Dec-07		116	2	Newtown	Nov-06	Nov-06		142	4
Burlington	Feb-07			45	-	Norfolk	Aug-06	Jan-07	Sep-06	93	5
Canton	Apr-05	Nov-06	Feb-07	151.5	2	North Haven	Feb-07		Jun-07	111	-
Chaplin	Dec-07			14.5	-	North Stonington	Dec-07			30	-
Cheshire	Aug-05	Nov-06	Jan-07	236.5	5	Old Lyme	Apr-07			93.5	-
Chester	May-06		Nov-06	84.5	-	Old Saybrook	Sep-07			69.5	-
Clinton	Dec-07			66.5	-	Orange	May-05			50	-
Colchester	May-07			59	-	Plainville	May-06		Feb-07	64	-
Cornwall	Feb-07		Sep-07	137.5	-	Portland	Nov-04	Jun-06	Jun-06	223	6
Coventry	Jan-08			99	-	Redding	Jun-07	Nov-07		115	3
Cromwell	Mar-07		Jun-07	83.5	-	Ridgefield	Feb-07	Aug-07	Sep-07	271	5
Danbury	Jun-07			156	-	Rocky Hill	May-07			90	-
East Haven	Jan-08			49.5	-	Salisbury	Dec-06		Feb-07	98	-
Easton	Apr-06		Jun-07	94	-	South Windsor	Oct-07			110.5	-
Enfield	Oct-07			83.5	-	Southington	Dec-06			82.5	-
Essex	Feb-06	Jun-07	Oct-06	124	-	Stamford	Apr-05	Nov-05	Dec-06	327	6
Fairfield	Feb-05	Nov-05	Aug-06	572.5	11	Stratford	Mar-07			123	-
Glastonbury	Jan-06	Jan-06		395.5	5	Torrington	Dec-06		May-07	112.5	-
Granby	Nov-07			72.5	-	Trumbull	Jun-05		Sep-06	82	-
Hamden	Jul-05	Oct-05	Sep-06	452.5	8	Vernon	Aug-07			117	-
Hartford	Feb-06	Feb-06	Feb-07	204	9	Washington	Aug-07			60	-
Harwinton	Apr-06		Nov-06	36	-	West Hartford	Jan-05	Jun-05	Oct-06	944	12
Lebanon	Jul-07			18.5	-	Weston	May-07	Nov-07		111	3
Madison	Jul-07	Sep-07		161	2	Westport	Mar-05	Jan-07	Dec-06	246.5	5
Manchester	Apr-07	Apr-07		313.5	3	Wethersfield	Apr-06	Nov-06	Nov-06	164.5	1
Mansfield	Jul-05	Feb-06	Sep-06	303	5	Wilton	Dec-07			132.5	-
Meriden	Aug-06		Nov-06	89.5	-	Windham	Dec-06			108	-
Middlefield	Oct-06		Jan-07	39.5	-	Windsor	Apr-07	Apr-07		135.5	1
Middletown	May-05	Jun-05	Jul-06	324	4	Woodbridge	Sep-05	Dec-07	Feb-07	109	3
Milford	Jan-05	Jan-06	Sep-06	259.5	4	Woodstock	Oct-07			63.5	-
						TOTAL kW	68	29	34	11,341	159

As explained above, the table demonstrates that to date more than 40 percent of Connecticut's cities and towns have committed themselves to clean energy, working toward energy independence and reducing greenhouse gas emissions that contribute to global warming.

Monitoring and Evaluation

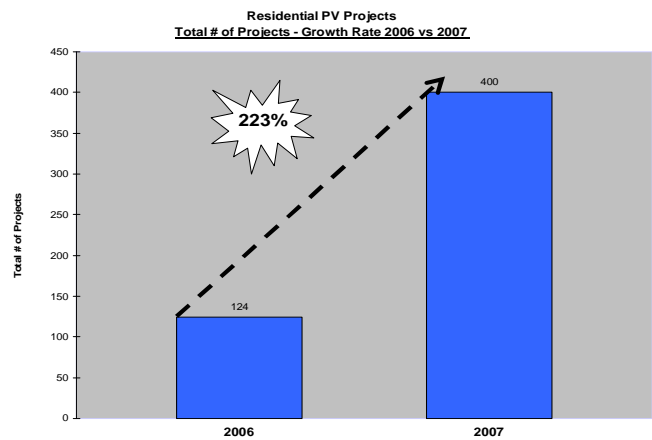
To ensure the highest quality and continuous improvement of the CCEF programs, respected independent consultants, including KEMA, Inc., and Nexus Market Research, have been retained by the CCEF through an RFP selection process to develop and implement monitoring and evaluation (“M&E”) reports to assess the effectiveness and efficiency of all of the CCEF Program Goals. A description of the M&E plans are included in each of the Program Goal sections of this FY 2009 – FY 2010 Comprehensive Plan below.

Growth in CCEF Programs

The CCEF has experienced tremendous growth in its programs and initiatives over the past two years. This growth is due in part to rising electricity prices, the need for energy independence, and the concern over global warming. There is high confidence that the growth in the CCEF programs, existing and new, will continue at a robust pace well into the future with the only limitation being the availability of funds. Graphs A–F illustrate the increase in the CCEF projects from calendar year 2006 through 2007.

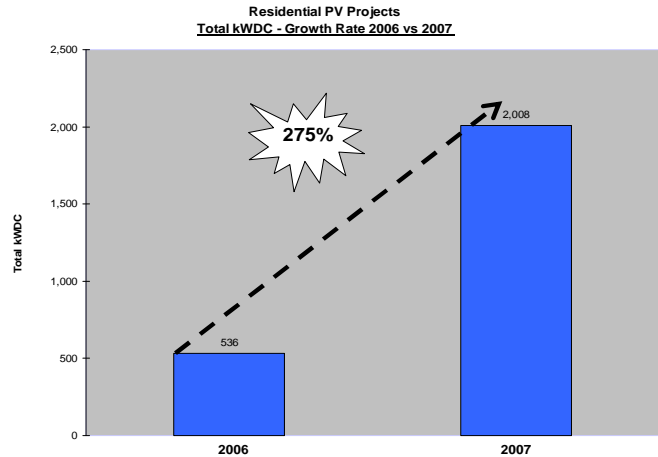
Graph A

The Residential Solar PV Program resulted in 400 homes in Connecticut qualifying for rooftop and ground-mounted solar PV systems.



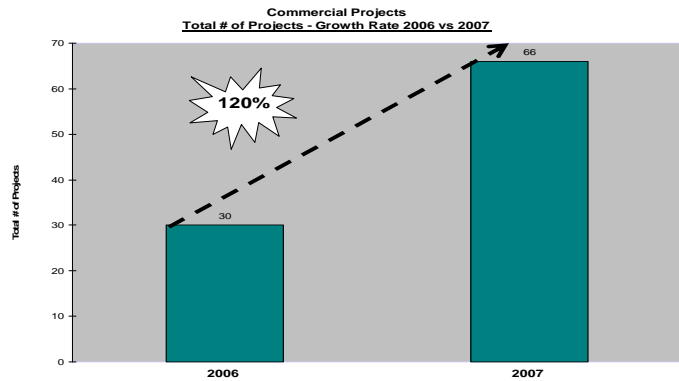
Graph B

The Residential Solar PV Program has resulted in a 275 percent growth rate in residential solar capacity of more than 2 MW in for 2007.



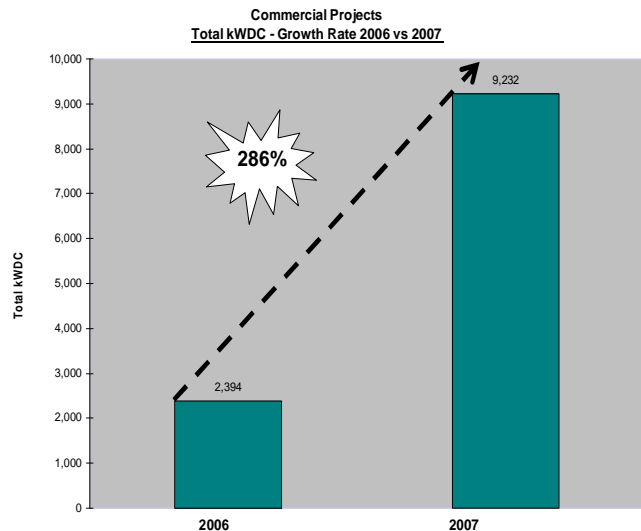
Graph C

Commercial renewable generation projects have increased substantially to 66 commercial projects in 2007, a 120 percent increase over 2006.



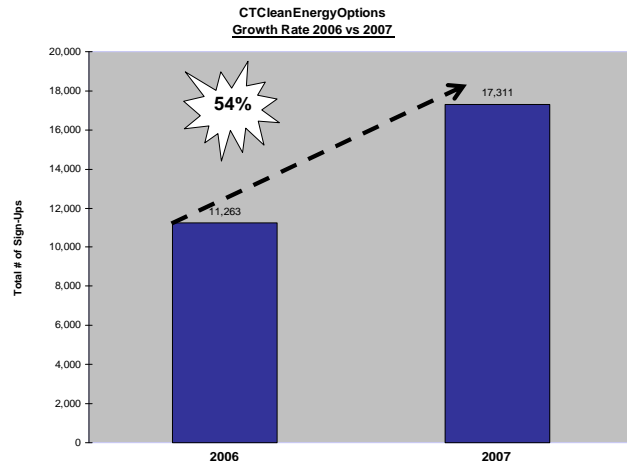
Graph D

The substantial increase in commercial renewable generation projects has resulted in more than 9 MW of renewable energy generation capacity for Connecticut, a 286 percent increase over 2006.



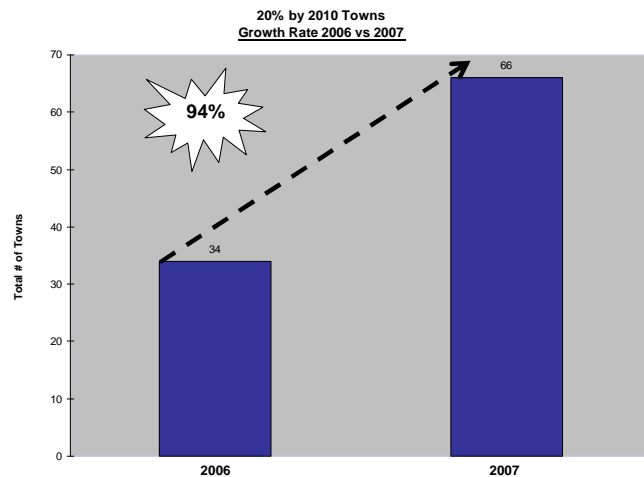
Graph E

The CT Clean Energy Options Program, a Department program that allows the electric distribution company customers to support clean energy and which is promoted by CCEF, has experienced a 54 percent growth rate over the past year.



Graph F

The CT Clean Energy Communities Program has resulted in 66 towns committing to buying 20% clean energy by 2010, and 28 towns both making the 20% by 2010 commitment and registering 100 or more residents, all resulting in 17,000 residents enrolling in the DPUC's CT Clean Energy Option Program. This is a 94% increase from 2006.



CCEF Incentives in Southwestern Connecticut

The CCEF provides additional incentives in its installed capacity programs to encourage renewable energy development in Southwestern Connecticut to help alleviate electric system congestion problems and to maximize the reduction of FMCCs as required of the CCEF by statute. Furthermore, the Connecticut Clean Energy Communities program offers additional incentives to towns located in that load-congested zone.

Strategic Focus and Comprehensive Plan Development

The strategic focus of this FY 2009 – FY 2010 Comprehensive Plan was the result of a collaborative process involving the CCEF Board working with staff and receiving input from the public. The CCEF Board represents a diverse array of stakeholder interests, including the Office

of Policy Management, consumer and business interests, the Department of Environmental Protection, the Department of Homeland Security, and the Office of Consumer Counsel. In order to obtain public input prior to the formal strategic planning process, a public hearing was held at the Legislative Office Building on July 12, 2007. As required under Public Act 07-152, the draft of the FY 2009 – FY 2010 Comprehensive Plan was made available for public comment for thirty (30) days. During the public comment period, three (3) public hearings were held in three different regions of the state to take comments from the public on the FY 2009 – FY 2010 Comprehensive Plan.⁶ This FY 2009 – FY 2010 Comprehensive Plan includes a summary matrix of all public comments received by the CCEF Board at the public hearings as well as written comments received from interested persons during the 30-day public comment period. The public input received was instrumental in helping to produce many of the renewable energy concepts and initiatives upon which the CCEF programs and initiatives in this FY 2009 – FY 2010 Comprehensive Plan was based.

CCEF Programs and Initiatives for FY 2009 – FY 2010

This is the first Comprehensive Plan submitted to the Department as a result of the 2007 legislation (Public Act 07-152) mandating that the Department review these Plans. The FY 2009 – FY 2010 Comprehensive Plan is for the period from July 1, 2008, through June 30, 2010, and the programs and initiatives contained in this FY 2009 – FY 2010 Comprehensive Plan target key strategic objectives to promote renewables for the benefit of ratepayers. This FY 2009 – FY 2010 Comprehensive Plan builds upon the strengths of the 2004–2007 Strategic Focus, recognizes immediate challenges, and anticipates future program changes. Moreover, this FY 2009 – FY 2010 Comprehensive Plan, including program allocations, was purposefully designed to allow the CCEF to respond nimbly to the state and region's dynamic energy environment by quickly adapting existing programs and/or implementing new programs to meet ratepayers and the state's renewable energy needs effectively and efficiently. Such changes will be reflected in the annual updates to the Department as required under Public Act 07-152. The existing programs and initiatives and associated program allocations contained in this FY 2009 – FY 2010 Comprehensive Plan are broken out by the three major Program Goals. The three Program Goals are:

⁶ The CCEF Board heard public comment on the draft Comprehensive Plan at Public Hearings held at the Eastern Connecticut State University in Willimantic on February 19, 2008, the South Norwalk Public Library in South Norwalk on February 20, 2008, and the Rocky Hill Marriott in Rocky Hill on February 21, 2008.

- Program Goal 1:** Installed Renewable Energy Capacity: Project 150 Program, Predevelopment Program, On-Site Renewable Distributed Generation Program, Residential and Small System Program, Municipal Renewable Energy and Efficient Energy Generation Grant Program, and Renewable Energy in State Buildings Program.
- Program Goal 2:** Emerging Renewable Energy Technologies: Operational Demonstration Program, Equity Investment Program, Infrastructure Development Program, and Technology & Economic Development Program.
- Program Goal 3:** Renewable Energy Demand and Sustainability: Clean Energy Communities Program, Community Innovations Grants Program, High Performance Schools Program, Learning for Clean Energy Innovation Program, Clean Energy Climate Solutions Program, and Connecticut Science Center–Smart Energy Gallery Program.

CCEF Programs Under Development for FY 2009 – FY 2010

The CCEF continuously seeks to incorporate and/or expand program and funding options through the promotion, development and investment in clean energy sources for the benefit of Connecticut ratepayers. The continued incorporation of new programs, and changes to existing programs, will focus on furthering the CCEF's goal of attaining a sustainable balance of energy production, economic growth and environmental impact. The CCEF is considering and evaluating the following new program and funding opportunities, which are included in the FY 2009 – FY 2010 Comprehensive Plan, depending on the needs and the level of funds available to the CCEF:

Geothermal:

Pursuant to Section 1 of Public Act 07-240, An Act Concerning Geothermal Heat Systems, the CCEF must perform a study that considers (1) the cost-effectiveness and efficiency of geothermal and other advanced heat pump systems, (2) appropriate geothermal applications for industrial, commercial and municipal purposes, and (3) any barriers, financial or otherwise, to greater applications and ways to promote more applications. After the technical analysis has been performed, the CCEF will prepare a complete draft report and engage both the Energy

Conservation Management Board and the Department in consultation. The CCEF anticipates that it will file the final report no later than March 31, 2008. CCEF staff have been meeting with a variety of interested stakeholders over the past few months to further their understanding of program potential and the most appropriate applications. Additionally, the CCEF is analyzing the potential incorporation of a geothermal heat pump program under Goal 1. As with any new program, once developed, staff will present a proposal describing the program, program criteria, incentive amount and budget requirements for the CCEF Board's consideration and approval.

Solar Thermal:

The CCEF is in the process of developing a solar thermal program. CCEF staff have recently completed research on solar thermal including a review of other states' solar thermal programs. The CCEF is currently considering criteria for a solar thermal program including eligibility requirements. The CCEF intends to host stakeholder/public meeting(s) to assist further in the analysis and structure of a solar thermal funding program. It is the CCEF's intention to propose a solar thermal pilot program to the CCEF Board in April 2008.

General Opportunities:

The CCEF will continue to proactively research and analyze various program, resource and funding opportunities, including but not limited to leveraging federal dollars. This may include but not be limited to those resources referenced above as well as biofuels, affordable housing programs and green jobs.

The CCEF is exploring opportunities with out-of-state wind projects to wheel in wind energy and renewable energy credits into Connecticut to help stabilize electric prices in the state. The CCEF is investigating the possibility of funding an out-of-state wind program through any RPS alternative compliance payments that the CCEF may receive.

Ultimately, the CCEF seeks to incorporate and/or expand program and financing options through the promotion, development and investment in clean energy sources for the benefit of Connecticut ratepayers. The incorporation of new programs will focus on furthering the goal of attaining a sustainable balance of energy production, economic growth and environmental impact.

Coordination of CCEF Programs with the Connecticut Energy Efficiency Fund Programs

The CCEF continues to work with the Energy Conservation Management Board (“ECMB”) and the electric distribution companies to further develop program linkages between the renewable energy programs and energy efficiency programs. Recent collaborative efforts have resulted in requirement that all projects under the On-Site Renewable Distributed Generation have an energy audit and implement any energy-efficient measures that provide a payback of five years or less before the CCEF will fund the renewable system. Increased coordination of energy efficiency and renewable energy efforts will lead to buildings and projects with larger reductions in energy use and peak demand in the most cost-effective manner. In addition, the ECMB and the CCEF have co-funded a permanent exhibit at the Connecticut Science Museum on energy efficiency, renewable energy technologies and solutions to climate change.

Tax-Related Risks to the FY 2009 – FY 2010 Comprehensive Plan

Federal Tax Credits

Because the energy market in Connecticut, as well in the rest of New England, is dynamic and facing continuous market and legislative changes at both the state and federal levels, it is impossible for the CCEF to know with certainty everything that may affect the CCEF programs – even in the near term. The CCEF, however, is aware that Congress’s failure, thus far, to extend the two key federal tax incentives for renewable projects (i.e., the Renewable Energy Investment Tax Credit [“ITC”]⁷ and the Renewable Electricity Production Tax Credit [“PTC”])⁸

⁷ The Federal Energy Policy Act of 2005 (H.R. 6) expanded the federal business energy tax credit for solar and geothermal energy property to include fuel cells and micro-turbines installed in 2006 and 2007, and to hybrid solar lighting systems installed on or after January 1, 2006. These provisions of the tax credit were later extended through December 31, 2008, by Section 207 of the Tax Relief and Health Care Act of 2006 (H.R. 6111). (A 10% federal energy tax credit was available to businesses that invested in or purchased solar or geothermal energy property in the United States prior to January 1, 2006.) For eligible equipment installed from January 1, 2006, through December 31, 2008, the credit is set at 30% of expenditures for solar technologies, fuel cells and solar hybrid lighting; micro-turbines are eligible for a 10% credit during this two-year period. For equipment installed on or after January 1, 2009, the tax credit for solar energy property and solar hybrid lighting reverts to 10% and expires for fuel cells and micro-turbines. The geothermal credit remains unchanged at 10%. The credit for fuel cells is capped at \$500 per 0.5 kilowatts (kW) of capacity. The maximum micro-turbine credit is \$200 per kW of capacity. No maximum is specified for the other technologies. Solar energy property includes equipment that uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat. Hybrid solar lighting systems are those that use solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight.

may potentially affect this Comprehensive Plan because the CCEF in determining incentive levels has historically factored the federal tax credits into its economic analysis of every project seeking funding from the Fund. **Table G** shows the potential impact of the absence of the ITC on the CCEF's funding of renewable energy DG and grid-connected installed capacity programs in the FY 2009 – FY 2010 Comprehensive Plan.

Table G:

CCEF-INSTALLED GRID-CONNECTED AND DG-INSTALLED CAPACITY PROGRAMS					
	kW	Installed \$/kW	Installed Total Cost	CCEF Rebate/Grant	ITC Contribution
Small Solar PV (Residential and Small System)	4,000	\$ 8,777	\$ 35,108,000	\$ 17,097,596	\$ 1,470,588
On-Site DG Solar PV (Commercial)	10,000	8,000	80,000,000	38,960,000	12,312,000
On-Site DG Fuel Cells (Commercial)	6,000	6,000	36,000,000	24,000,000	3,600,000
Total CCEF Programs	20,000		151,108,000	80,057,596	17,382,588
P 150 CCEF (Fuel Cells)	69,000	4,500	310,500,000	1,575,000	92,677,500
P 150 DPUC (Fuel Cells)	16,800	\$ 4,500	\$ 75,600,000	\$ 1,575,000	\$ 22,207,500

Geothermal energy property includes equipment used to produce, distribute or use energy derived from a geothermal deposit. It does not include geothermal heat pumps. For electricity produced by geothermal power, equipment qualifies only up to, but not including, the electrical transmission stage. (Source: DSIRE website)

⁸ The Renewable Electricity Production Credit (PTC) is a per kilowatt-hour tax credit for electricity generated by qualified energy resources. Enacted as part of the Energy Policy Act of 1992, the credit expired at the end of 2001 and was subsequently extended in March 2002 as part of the Job Creation and Worker Assistance Act of 2002 (H.R. 3090). The tax credit then expired at the end of 2003 and was not renewed until October 2004, as part of H.R. 1308, the Working Families Tax Relief Act of 2004, which extended the credit through December 31, 2005. The Energy Policy Act of 2005 (H.R. 6) modified the credit and extended it through December 31, 2007. In December 2006, the credit was extended for yet another year (through December 31, 2008) by Section 207 of the Tax Relief and Health Care Act of 2006 (H.R. 6111). The PTC applies to the following resources that may be relevant to the FY 2009 – FY 2010 Comprehensive Plan: (1) Wind, (2) Closed-loop biomass, (3) Open-loop biomass, (4) Geothermal energy, (7) Landfill gas, and (9) Hydropower. The PTC provides a tax credit of 1.5¢/kWh (in 1993 dollars and indexed for inflation) for wind, closed-loop biomass and geothermal. Currently, the PTC for these technologies is 2.0¢/kWh. Electricity from open-loop biomass, small irrigation hydroelectric, landfill gas, municipal solid waste resources and hydropower receive half that rate – currently 1.0¢/kWh. The duration of the credit is 10 years. However, open-loop biomass, geothermal, small irrigation hydro, landfill gas, and municipal solid waste combustion facilities placed into service after October 22, 2004, and before enactment of EPAct 2005, on August 8, 2005, are eligible for the credit for a five-year period. Note, however, that owners of geothermal projects who claim the federal business energy tax credit may *not* also claim the PTC. (Source: DSIRE website)

The CCEF will be monitoring the federal tax situation, examining other potential sources of funding to address the potential shortfall and/or making program adjustments if the federal tax credits are not renewed.

Renewable Portfolio Standard and Alternative Compliance Payments

Conn. Gen. Stat. § 16-245a, as amended by Public Act 07-242, requires the electric distribution companies and the licensed load-serving suppliers to demonstrate that certain percentages of their total services or supply are being generated from Class I renewable energy sources. The RPS obligation percentages are as follows:

2007	3.5%	2014	11.0%
2008	5.0%	2015	12.5%
2009	6.0%	2016	14.0%
2010	7.0%	2017	15.5%
2011	8.0%	2018	17.0%
2012	9.0%	2019	19.5%
2013	10.0%	2020	20.0%

The electric distribution companies and licensed load-serving suppliers can comply with the RPS requirement by:

- (1) Purchasing generation from eligible sources in Connecticut or in ISO-NE for physical delivery to Connecticut customers, bundled with renewable energy credits or certificates (“RECs”) that the source generates (bundled compliance); or
- (2) Purchasing RECs from generators that can physically deliver eligible renewable electric power into ISO-NE, but who sell the renewable attribute separately from the energy produced (REC compliance); or
- (3) Satisfying the RPS or any deficiencies by making payments for the RECs equal to Connecticut’s REC price, which is capped at \$55/MWh (This penalty payment is commonly called the Alternative Compliance Payment (“ACP”).⁹

Conn. Gen. Stat. § 16-244c(j)(1) requires that all ACPs must be deposited with the CCEF to promote Class I renewable sources. Under Conn. Gen. Stat. § 16-245a and § 16-245a-1(a) of

⁹ Source: The Connecticut Light and Power Company and The United Illuminating Company’s 2008 Integrated Resources Plan for Connecticut.

the Regulations of State Agencies, the Department is charged with implementing RPS compliance on the electric distribution companies and conducts annual reviews to determine their compliance with the RPS requirements. At present, the Department is reviewing the electric distribution companies' and suppliers' compliance with their 2006 RPS requirements, which the CCEF anticipates will be approximately \$5.5 million and is included in the FY 2009 – FY 2010 Comprehensive Plan budget. The possibility of future ACPs by the electric distribution companies as a penalty for not complying with the RPS in any year may result in additional funding for the FY 2009–2010 Comprehensive Plan. The Plan assumes the 2006 payments but does not assume further ACPs given the uncertainty of RPS shortfall, if any.

Awards and Recognitions

The CCEF has attracted national and international attention for its innovative programs and initiatives. Many of the CCEF programs have become models for other states and countries. Major awards received by the CCEF include: the **2005 Climate Protection Award** from the U.S. Environmental Protection Agency (“EPA”), honoring Connecticut's efforts to reduce greenhouse gas emissions; and the **2006 Green Power Pilot Award** from the EPA and the U.S. Department of Energy (“DOE”), honoring the Connecticut Clean Energy Communities Program. In addition, delegations from foreign countries such as Argentina and Sweden have traveled to Connecticut to meet with the CCEF to gain insight into its cutting-edge renewable energy development programs. The CCEF staff have been invited as feature speakers at world conferences in Germany and France, and the United States Department of Energy, at no cost to Connecticut ratepayers.

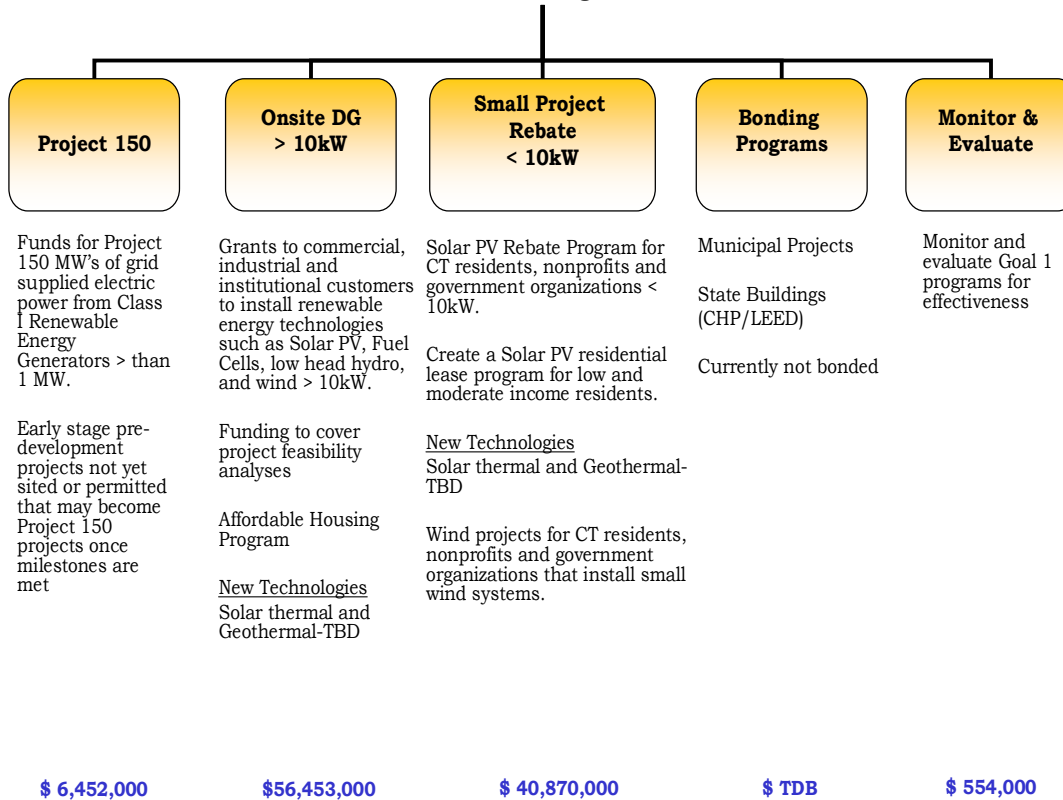
**PROGRAM GOAL 1 – INSTALLED RENEWABLE ENERGY
CAPACITY**

Strategic Objective

***CONNECTICUT RATEPAYERS WILL HAVE ACCESS TO A
DIVERSE SUPPLY OF CLEAN ENERGY RESOURCES***

Goal 1 Increase Installed Capacity

FY 2009 – FY 2010 Program Allocations



Project 150 Program

DESCRIPTION Project 150 (formerly called Project 100) is an initiative aimed at increasing clean energy supply in Connecticut by at least 150 megawatts (MWs) of installed capacity by July 1, 2008. The Project 150 initiative is an opportunity for developers, manufacturers and financiers to advance Connecticut-based Class I utility-grade clean renewable energy projects in the state.

OBJECTIVE Mandated by the Connecticut legislature, Project 150 is designed to encourage financing of renewable energy projects through the stability of long-term Electricity Purchase Agreements ("EPAs"), stimulate the development of new projects in Connecticut and increase the available supply of renewable energy.

Under Project 150, the electric distribution companies ("EDCs") will enter into EPAs with generators of Class I renewable energy for no less than a 10-year contract period. Pricing under these EPAs will include a premium of 5.5 ¢/kWh. Project 150 EPAs must be filed with the Connecticut Department of Public Utility Control by July 1, 2008, and must arise from projects that also receive funding from the CCEF. Furthermore, eligible projects must have a capacity of at least 1 MW.

Public Act 07-242 requires that on and after October 1, 2007, and until September 30, 2008, the EPAs for renewable energy capacity shall be composed of not less than a total, apportioned among each EDC, of one hundred twenty-five (125) megawatts; and on and after October 1, 2008, such EPAs shall be composed of not less than a total, apportioned among each EDC, of one hundred fifty megawatts (150).

On September 27, 2006, the first round of Project 150 (formerly Project 100) secured one EPA for 15 MWs of renewable energy capacity.

The second round of Project 150 resulted in eight (8) EPAs for a total of 124 MW of renewable energy capacity, with one EPA contingent upon attrition by at least one of the other projects.

The third round of Project 150 will commence after the DPUC approval of the CCEF RFP scheduled to be submitted by March 14, 2008.

TARGET MARKET Renewable Energy Project Developers interested in developing utility-scale, grid-connected projects in the state of Connecticut.

INCENTIVE The CCEF will award at least \$50,000 to each project selected for recommendation and successfully contracted. Proposals, however, may request funds from the CCEF in excess of the \$50,000 level.

GOALS In funding years FY 2009 – FY 2010, the CCEF will seek to provide recommendations for EPAs with the EDCs' utilities for an additional twenty-six (26) megawatts.

BUDGET \$5,000,000

Pre-Development Loan Program

<i>DESCRIPTION</i>	The CCEF provides non-recourse loan funding to qualified early-stage “Pre-Development” projects that have yet to begin siting, permitting or feasibility analysis but that may ultimately be considered under the Project 150 Program once all of the milestones are met. The projects must incorporate existing and proven clean energy resources for power production and have a high likelihood of successful development and commercialization in order to qualify.
<i>OBJECTIVE</i>	In order to foster the growth of renewables, the Pre-Development Loan Program seeks to support eligible projects at the very earliest stages of development by supporting some of the preliminary costs in developing projects and expanding the pipeline of projects for consideration in the Project 150 Program.
<i>TARGET MARKET</i>	Renewable technology developers interested in developing grid-connected renewable energy projects in the state of Connecticut.
<i>INCENTIVE</i>	Funding in the form of non-recourse loans of up to \$250,000 is available for projects under five (5) megawatts, and funding in the form of non-recourse loans of up to \$500,000 is available for projects of five (5) megawatts or greater. Generally the loans are payable by the borrower at the earlier of: (a) the closing date of permanent project financing; (b) one year after the commencement date of commercial operation of the project; (c) the consummation of a sale of the project or the acquisition of a controlling interest in the company (through merger, sale of stock or otherwise) by a third party or parties, unless such action is approved by the CCEF; (d) the sale or disposition of substantially all of the assets or business of the company or any major part of its assets or business (whether by sale, exclusive license or otherwise) to a third party, unless

such action is approved by the CCEF. Projects that have received funding under this program can apply for inclusion in the Project 150 Program if they have progressed to the point where they meet the eligibility requirements of the Project 150 Program.

GOALS

Achieve six (6) Pre-Development projects using Class 1 renewable resources.

BUDGET

\$1,452,000

On-Site Renewable Distributed Generation Program

DESCRIPTION

The On-Site Renewable Distributed Generation Program is a flexible, integrated-technology, financial support program designed to stimulate demand for “behind-the-meter” installations of renewable energy at commercial, industrial, institutional (“CI&I”), not-for-profit and governmental buildings in Connecticut. Systems utilizing solar photovoltaic (PV) energy, solar thermal, geothermal energy, wind, ocean thermal energy, wave or tidal energy, fuel cells, landfill gas, hydropower that meets the low-impact standards of the Low-Impact Hydropower Institute, hydrogen production and hydrogen conversion technologies, low emission advanced biomass conversion technologies, alternative fuels used for electricity generation including ethanol, biodiesel or other fuel produced in Connecticut and derived from agricultural produce, food waste or waste vegetable oil, provided the Commissioner of Environmental Protection determines that such fuels provide net reductions in greenhouse gas emissions and fossil fuel consumption, usable electricity from combined heat and power systems with waste heat recovery systems, thermal storage systems and other energy resources and emerging technologies that have significant potential for commercialization and that do not involve the combustion of coal, petroleum or petroleum products, municipal solid waste or nuclear fission.

Since it would be inadvisable to install renewable energy generation equipment in a building or host site that is wasteful of energy, the On-Site Distributed Generation Program requires the confirmation of a reasonable level of energy efficiency in the systems that constitute the electric load of the building or host site. A building or host site can satisfy this requirement by, within the 36 months prior to submission of the CCEF incentive application, documenting: (1) participating in one or more of the Conservation and Load Management (“C&LM”) programs

administered by CL&P or United Illuminating under the Connecticut Energy Efficiency Fund, or (2) implementing other significant energy efficiency measures on the major electrical systems of the building or host site (e.g., lighting, HVAC, electric motors, process improvement, etc.).

However, if no significant energy efficiency measures have been implemented on the building or host site within the past three years, an “energy audit” must be submitted along with the CCEF incentive application. The energy audit must include recommended energy efficiency measures and estimated costs and paybacks. The energy audit may be performed either through participation in one of the Connecticut Energy Efficiency Fund programs or by a qualified third-party energy services company. Energy audits conducted by the building’s or host-site’s personnel or the renewable-energy project developer will not be accepted.

Before any of the CCEF funds will be released, the building or host site must provide documentation that all of recommended measures, with a simple payback of five (5) years or less, have been implemented.

AFFORDABLE HOUSING

The Affordable Housing Program will help to stimulate interest in, and demand for, renewable energy projects in housing facilities that historically have been built using a “lowest first cost” standard.

OBJECTIVE

To encourage the development of renewable distributed generation capability to ease peak demand and provide an alternative to fossil fuel while creating a vibrant renewable industry in Connecticut; in particular solar and fuel cells. This program supports the installation of systems that generate electricity at commercial, industrial, institutional (CI&I), and not-for-profit and governmental buildings in the state greater than 10kW by

making renewable systems for non-residential users of electricity competitive with current electric costs.

AFFORDABLE HOUSING

Provide access to capital to ensure that the benefits of renewable energy will be available to affordable housing residents.

TARGET MARKET Commercial, industrial and institutional (CI&I), not-for-profit and government entities.

INCENTIVE The CCEF buys down the cost of renewable energy generating equipment. The level of support for individual awards will vary based on the specific economics of the installation. The total available grant amount for a given project is limited to \$4 million. A 2¢/kWh premium will be available for solar PV projects in Southwestern Connecticut and a 1.5 ¢/kWh will be available for projects involving other clean energy technologies in this region. Additionally, the program offers grants of up to \$50,000 per installation to support site-specific technical and financial feasibility studies.

CCEF Funding Limits

Technology	Solar	Fuel Cells	Small Wind	Small Biomass	Landfill Gas	Hydro
Funding cap	\$5.00/W ¹⁰	\$4.70/W	\$3.60/W	\$3.30/W	\$3.20/W	TBD
Evaluation timeframe	20 yrs	10 yrs ¹¹	15 yrs	10 yrs	10 yrs	20 yrs
SW CT premium ¹²	2 ¢/kWh	1.5 ¢/kWh	1.5 ¢/kWh	1.5 ¢/kWh	1.5 ¢/kWh	1.5 ¢/kWh

Declining Incentive Block Schedule ¹³ for For-Profit Projects	Max Incentive – PTC/Watt	Max Incentive (Leed) – PTC/Watt
<100 kW	\$4.75	\$5.00
>100 kW but <200kW	\$4.25	\$4.50
>200 kW but <300kW	\$3.75	\$4.00
>300 kW (w/ave. annual peak during 11am – 3pm)	\$3.00	\$3.25
>300 kW (w/ave. annual peak outside 11am – 3pm)	\$2.00	\$2.25

AFFORDABLE HOUSING

Up to \$6.00/watt for qualifying low-income projects.

GOALS

COMMERCIAL ENTITIES

Award grants to support 5 MWs of new solar PV systems (15–25 installations).

Award grants to support 4 MWs of new fuel cell systems (10–15 installations).

Award grants to support the installation of 1.6 MWs of new other Class 1 resources (wind, solar thermal, geothermal) (10–15 installations).

¹⁰ PTC rating: PTC stands for "PVUSA Test Conditions." PTC watt rating is based on 1000 Watt/m² solar irradiance, 20 degree Celsius ambient temperature, and 1 meter/second wind speed. The PTC watt rating is lower than the "Standard Test Conditions" (STC), a watt rating used by manufacturers. Ratings are available at the CEC website at http://www.consumerenergycenter.org/cgi-bin/eligible_pvmodules.cgi.

¹¹ Subject to fuel cell manufacturer's specifications.

¹² Southwestern CT refers to the ISO-NE's Designated Congestion Area identified under Market Rule 1, Appendix A.

¹³ Adopted by Board on 3/31/08 for Commercial For Profit Only.

GOVERNMENT, SCHOOLS AND NONPROFITS

Award grants to support a minimum of 2 MWs of new solar PV systems (15–30 installations).

Award grants to support a minimum of 0.5 MW of new fuel cell systems (2–3 installations).

Award grants to support 0.16 MWs of new Other Class 1 Resources (wind, solar thermal, geothermal) (5–15 installations).

Total On-Site – 16.5 MW (85–125 systems)

AFFORDABLE HOUSING

Grants awarded to produce 300 kWac of affordable housing solar PV and solar thermal installations.

<i>BUDGET</i>	\$56,453,000
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Residential and Small System Renewable Program

DESCRIPTION

SMALL SOLAR PHOTOVOLTAIC (PV) (10kW or Less)

The CCEF offers rebates through designated participating installers for Connecticut residents, nonprofits and governmental organizations that install solar PV systems on their homes or at their facilities. The CCEF is also assisting the Connecticut Municipal Electric Energy Cooperative ("CMEEC") to develop renewable programs, akin to the CCEF's solar rebate programs.

SMALL WIND

The CCEF is working on developing a small wind development program similar to its residential solar rebate programs.

SOLAR LEASE

To address the barrier of high initial capital costs, the CCEF is developing a CCEF Solar Leasing Program to provide leases to low- and moderate-income households and small nonprofit installations for the purchase and installation of approximately 1,000 solar PV systems.

OTHER NEW TECHNOLOGIES

Solar Thermal and Geothermal – Under consideration

OBJECTIVE

SMALL SOLAR

To make renewable systems financially feasible for residential and small users while encouraging the development of renewable distributed generation capability to ease peak demand and provide an alternative to fossil fuels. Also, to create a vibrant solar PV industry in Connecticut.

SMALL WIND

Stimulate the market and create an infrastructure for wind technology in CT.

SOLAR LEASE PROGRAM

Make PV systems affordable for low- to middle-income homeowners and small nonprofit and municipal installations.

OTHER NEW TECHNOLOGIES

To encourage the development and implementation of other new, emerging technologies.

TARGET MARKET Residential, Nonprofit, Governmental, Low- and Moderate-Income Residential

INCENTIVES

SMALL SOLAR PV

Households can receive rebates of up to \$46,500 and nonprofit and government entities can receive rebates of up to \$50,000 for a 10-kilowatt system. The cap is \$5/watt (PTC rating) for first 5 kW and \$4.30/W (PTC) for next 5 kW with the actual rebate based on the efficiency of the system.

SMALL WIND

Comparable to the on-site DG program

SOLAR LEASE

This program is under development, but the incentive will be designed to cover the after-rebate cost of the solar system through the average

savings of the customer's cost of electricity realized through the use of the solar system.

OTHER NEW TECHNOLOGIES

Solar Thermal and Geothermal TBD.

GOALS

SMALL SOLAR PV

Achieve the installation of 4,648 kWac of new small solar PV (10k or less) on-site systems (1,000 installations).

SMALL WIND

Install 200 kWac of new small wind systems (10 kW or less) (15–30 installations)

SOLAR LEASE

Achieve 667 leases

OTHER NEW TECHNOLOGIES *(including solar thermal and geothermal)*

Incentives to award grants to facilitate the installation of 200 kWac of new Other Class I resources (such as solar thermal and geothermal) during the FY 2009 – FY 2010 time period. These programs are under development.

BUDGET

\$40,870,000

Municipal Renewable Energy and Efficient Energy Generation Grant Program

<i>DESCRIPTION</i>	Under Public Act 07-242, the CCEF is to establish a municipal renewable energy and efficient energy generation grant program. The CCEF will provide grants under the program to municipalities to purchase and operate, for municipal buildings, (1) renewable energy sources, including solar energy, geothermal energy, and fuel cells or other energy-efficient hydrogen-fueled energy or (2) energy-efficient generation sources, including cogeneration units that are at least 65 percent efficient. The CCEF will give priority to grant applications for disaster relief centers and high schools. The act authorizes up to \$50 million in bonding for the program, with the proceeds going into a separate account within the Clean Energy Fund.
<i>OBJECTIVE</i>	Achieve the installation for municipalities of 5 MWac of energy using appropriated state bond funds with priority given to emergency facilities.
<i>TARGET MARKET</i>	Municipalities
<i>INCENTIVE</i>	Each grant must make the cost of purchasing and operating the generation source competitive with the municipality's current electricity costs.
<i>GOALS</i>	Award grants to projects that produce 5 MWac of new efficient energy generating systems.
<i>¹⁴BUDGET</i>	\$50,000,000

¹⁴ This program will be funded through state bond funding only. As of the date of the Comprehensive Plan, the State Bond Commission had not yet appropriated the bond funds to the CCEF.

Renewable Energy in State Buildings Program

<i>DESCRIPTION</i>	Public Act 07-242 authorizes \$30 million in bonds for the CCEF to fund the net project costs of renewable energy and combined heat and power (cogeneration) projects in state buildings through the Clean Energy Fund. To be eligible, a building must be certified in the LEED program or in the process of being certified. PA 07-4, June Special Session, expands eligibility for this program to include buildings that (1) are becoming LEED silver rated (a more stringent standard than certified), (2) have a two-globe rating in the Green Globes USA design program (another rating system), or (3) are in the process of receiving this latter rating.
<i>OBJECTIVE</i>	Grants awarded for \$30,000,000 for renewable energy and CHP for LEED state buildings using state bond money.
<i>TARGET MARKET</i>	State government buildings
<i>INCENTIVE</i>	The grant will make the cost of purchasing and operating the generation source competitive with the state's current electricity expenses.
<i>GOALS</i>	Achieve the installation of 5 MWs of new energy-generating systems for state buildings.
<i>¹⁵BUDGET</i>	\$30,000,000

¹⁵ This program will be funded through state bond funding. As of the date of the Comprehensive Plan, the State Bond Commission had not yet appropriated the bond funds to the CCEF.

Monitoring and Evaluation

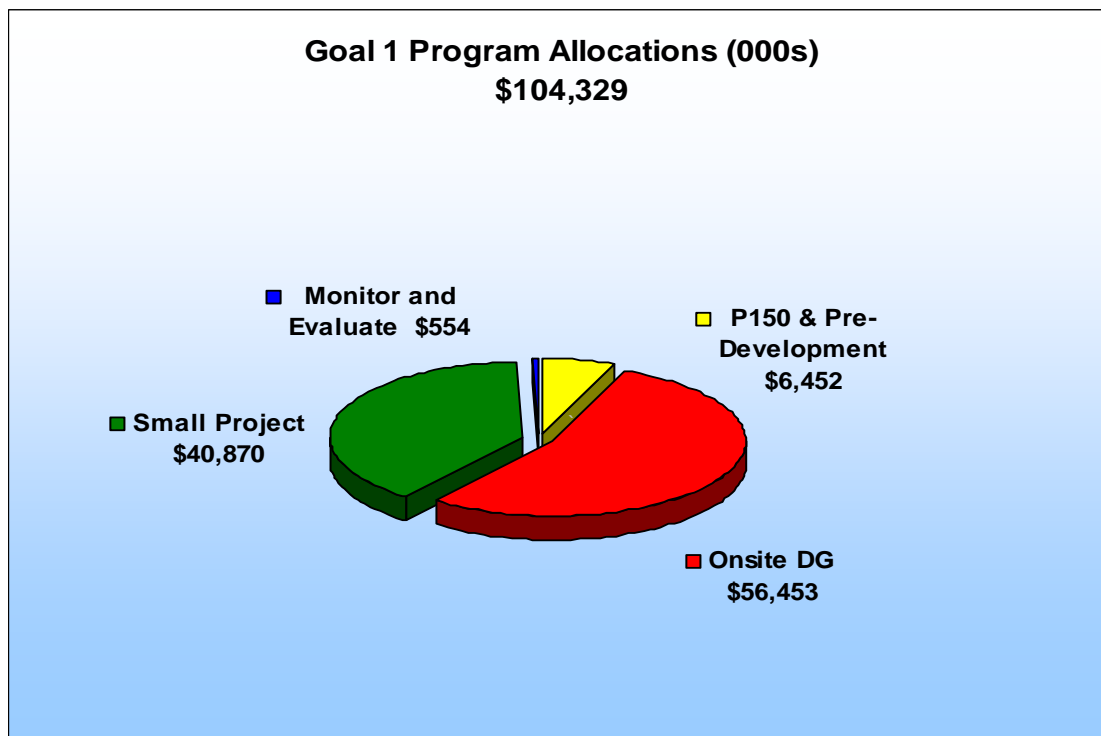
DESCRIPTION In accordance with the CCEF strategic plan, Goal 1 Programs will be evaluated on an annual basis by an independent consultant to assess the effectiveness and cost efficiency of the programs including progress in meeting the goal objectives.

FUNDING \$554,000

Projected Program Allocations Goal 1

For the period FY 2009 – FY 2010

ALLOCATIONS BY PROGRAM (000's)	Estimated Revenues from all Sources FY09–FY10	Available Project Allocations FYE 6/30/08	Estimated Operating Expenses FY09–FY10	Total Projected Allocations FY09–FY10	% of All Programs
Goal 1					
Project 150	\$ 5,387	\$ -	\$ (387)	\$ 5,000	3.9
Pre-Development	1,362	202	(112)	1,452	1.1
Comm. Solar/For Profit	16,684	6,769	(1,684)	21,769	17.0
Comm. Solar/Not for Profit/Govt	10,970	2,547	(970)	12,547	9.8
Res/Small Solar Rebate Program	3,253	4,928	(587)	7,594	5.9
Solar PV Lease Program	1,011	13,078	(1,011)	13,078	10.2
Solar PV Lease Prog Rebate Comp	1,268	16,400	(1,268)	16,400	12.8
Affordable Housing DG Pilot Prog	2,190	453	(190)	2,453	1.9
Fuel Cell	7,293	10,716	(1,293)	16,716	13.1
Other Technologies	4,490	2,330	(490)	6,330	4.9
Feasibility Studies	34	436	(34)	436	0.3
Monitoring and Evaluation Programs	43	554	(43)	554	0.4
Goal 1 Total	53,985	58,413	(8,069)	104,329	81.6



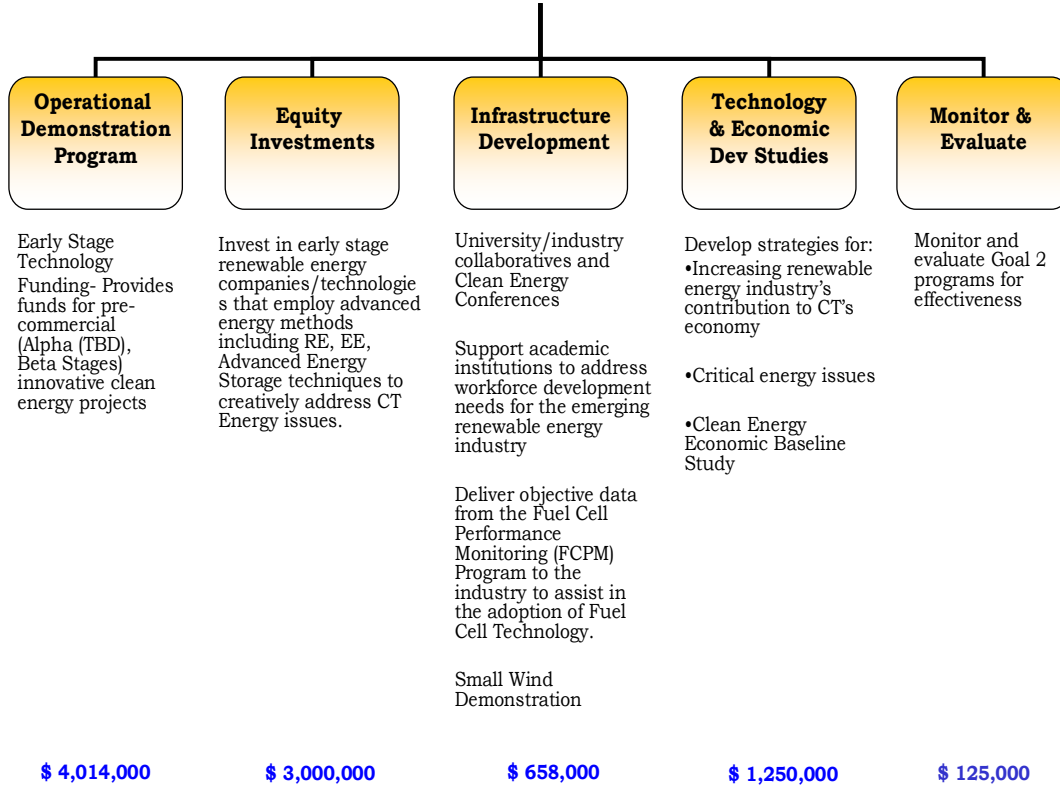
**PROGRAM GOAL 2 – EMERGING RENEWABLE ENERGY
TECHNOLOGIES**

Strategic Objective

***IDENTIFY AND PROMOTE RENEWABLE TECHNOLOGIES
AND TOOLS TO ADDRESS CHALLENGING ENERGY ISSUES
WHILE PROVIDING ECONOMIC DEVELOPMENT
OPPORTUNITIES FOR CONNECTICUT***

Goal 2 Promote Renewable Technologies

FY 2009 – FY 2010 Program Allocations



Operational Demonstration Program

<i>DESCRIPTION</i>	<p>The Operational Demonstration Program ("ODP") makes funds available to pre-commercial stage clean energy projects that rely on the innovative use or application of renewable energy generation technologies. The funding may be used to demonstrate the commercial viability and economic benefits of innovative or new technology applications including fuel cells, wind solar, wave and tidal energy, ocean thermal energy, biomass, landfill gas, certain types of hydropower or other technologies eligible for CCEF funding. Additionally, hydrogen generation and storage technologies will be considered. The ODP is not intended to support R&D or alpha-stage projects.</p>
<i>OBJECTIVE</i>	<p>The ODP was created to encourage the deployment of innovative renewable generation technologies in CT. Commercialization of these technologies will help to create and grow a vibrant renewable energy industry with accompanying jobs in the state.</p> <p>In the FY 2009 – FY 2010 timeframe, the CCEF plans to invest in early-stage renewable energy companies/technologies that employ advanced energy methods including renewable energy, energy efficiency and advanced energy storage techniques to creatively address Connecticut energy issues.</p>
<i>TARGET MARKET</i>	<p>Developers/Entrepreneurs</p>
<i>INCENTIVE</i>	<p>The maximum amount of funding available for an individual project is \$750,000, but funding amounts over \$500,000 must be justified by the unique nature of the project or provide compelling benefits to Connecticut ratepayers. Funding will be provided in the form of a loan, to be repaid upon the achievement of commercial success, a level of product sales</p>

defined by mutual agreement between the CCEF and successful applicants. The CCEF requires a 25 percent cash cost share.

GOALS

In FY 2009, the Operational Demonstration Program will be revised to increase quantity and quality of projects. In addition, an alpha-stage program to support the Operational Demonstration Program will be developed. Evaluate no less than 110 early-stage technology companies and fund 11 companies.

FUNDING

\$4,014,000

Equity Investments Program

DESCRIPTION Invest in early-stage renewable energy companies/technologies that employ advanced energy methods including renewable energy, energy efficiency and advanced energy storage techniques to creatively address Connecticut energy issues.

OBJECTIVE The Connecticut Clean Energy Fund seeks to benefit Connecticut ratepayers by encouraging the growth of the state's clean energy industry. This program provides funding to support the research, development, manufacture, commercialization, deployment and installation of renewable energy technologies. This program takes a multifaceted approach to fulfilling its mission of building a vibrant, growing clean-power marketplace.

TARGET MARKET Early-stage renewable energy companies.

INCENTIVE Equity investments up to half a million dollars initially with the possibility for additional rounds of funding as merited.

GOALS Fund at least two (2) innovative renewable energy companies/technologies and at least one (1) potential investment in advanced energy storage systems technology. Fund at least one (1) potential investment for an advanced energy utilization technology integrating energy efficiency and renewable energy.

FUNDING \$3,000,000

Infrastructure Development Program

DESCRIPTION

ACADEMIC WORKFORCE DEVELOPMENT

Support academic institutions to address workforce development needs for the emerging renewable energy industry.

FUEL CELL PERFORMANCE MONITORING

The Fuel Cell Performance Monitoring (“FCPM”) program is intended to actively monitor operational, experiential and economic performance data from CT-deployed fuel cell projects to substantiate the value proposition for fuel cell technologies. It seeks to make this information accessible to potential investors, procurers and manufacturers of fuel cells in order to reduce the perception of the risk of owning or investing in this technology. Power Management Concepts (“PMC”) has been contracted to design, build and administer this program through a rigorous RFP process. This will be an ongoing effort expected for 2–5 years.

OBJECTIVE

ACADEMIC WORKFORCE DEVELOPMENT

Establish a workgroup including Department of Education (“DOEd”), Department of Labor (“DOL”) and other stakeholders. Issue an RFP to identify an organization that will pilot a post–high school workforce development program for careers in the renewable energy and the fuel cell technology field. Select and fund the organization to implement the post–high school pilot workforce development program and present the first-year evaluation report of the pilot program to the CCEF Board, DOEd, DOL and other stakeholders.

FUEL CELL PERFORMANCE MONITORING

In order to implement the FCPM system the PMC will first establish the required data to be monitored through personal interviews with current owners of fuel cells. PMC will develop software specifications to acquire and display information in a convenient and practical way. PMC will complete hardware infrastructure development including deployment of the data-gathering system and launch the FCPM. Quarterly analysis reports will be prepared of fuel cell performance data.

TARGET MARKET Fuel Cell Industry/Renewable Energy Industry

INCENTIVE ACADEMIC WORKFORCE DEVELOPMENT

This is a competitive solicitation. The total funding available under this program will be based on a determination of the best program proposed for the most cost-effective price, subject to any CCEF budget constraints.

FUEL CELL PERFORMANCE MONITORING

PMC has a one-year contract with a multiyear option to implement the monitoring program. The option to extend will be based on a year-by-year competitive cost comparison.

GOALS ACADEMIC WORKFORCE DEVELOPMENT

Successfully implement the post-high school pilot workforce development program focused on renewable technologies.

FUEL CELL PERFORMANCE MONITORING

Successfully acquire one year's worth of objective fuel cell performance data and disseminate through web access. Expected completion date for the system activation is October 2008 with ongoing data acquisition and monitoring for at least one year after this date.

FUNDING

COMBINED INFRASTRUCTURE

\$658,000

Technology and Economic Development Studies Programs – Strategic Development

DESCRIPTION

Develop renewable energy strategies to:

- Increase the industry's contribution to Connecticut's economy
- Address critical energy issues (e.g., peak energy reductions, RMR reductions, reliability).

OBJECTIVE

Identify a contractor to explore, assess and produce a baseline study report for the economic strategy to identify supplier gaps. Complete the final report with recommendations for programs, initiatives and infrastructure improvements to enhance economic contributions from the renewable energy industry. Define and implement programs and initiatives to achieve recommendations from baseline study. Complete subsequent economic development impact study.

Reexamine the existing critical energy issues study and update program impacts, modifying the program accordingly to capture new opportunities. Evaluate such opportunities to address peak demand reductions by Energy Efficiency (EE), Renewable Energy (RE) and Energy Storage technologies.

GOALS

Economic Development: Create an assessment tool that allows the CCEF to measure the economic development impact of programs and projects. Successfully develop initiatives to address economic development gaps. Roll out and implement developed strategies.

Critical Energy Studies: The CCEF hopes to develop a renewable energy strategy that will focus, in part, on addressing critical energy issues for Connecticut. To that end the CCEF will acquire existing or develop new energy studies that will help to identify opportunities where renewable

energy, energy efficiency or energy storage methods may be employed to contribute solutions to these pressing issues.

FUNDING

\$1,250,000

Monitoring and Evaluation

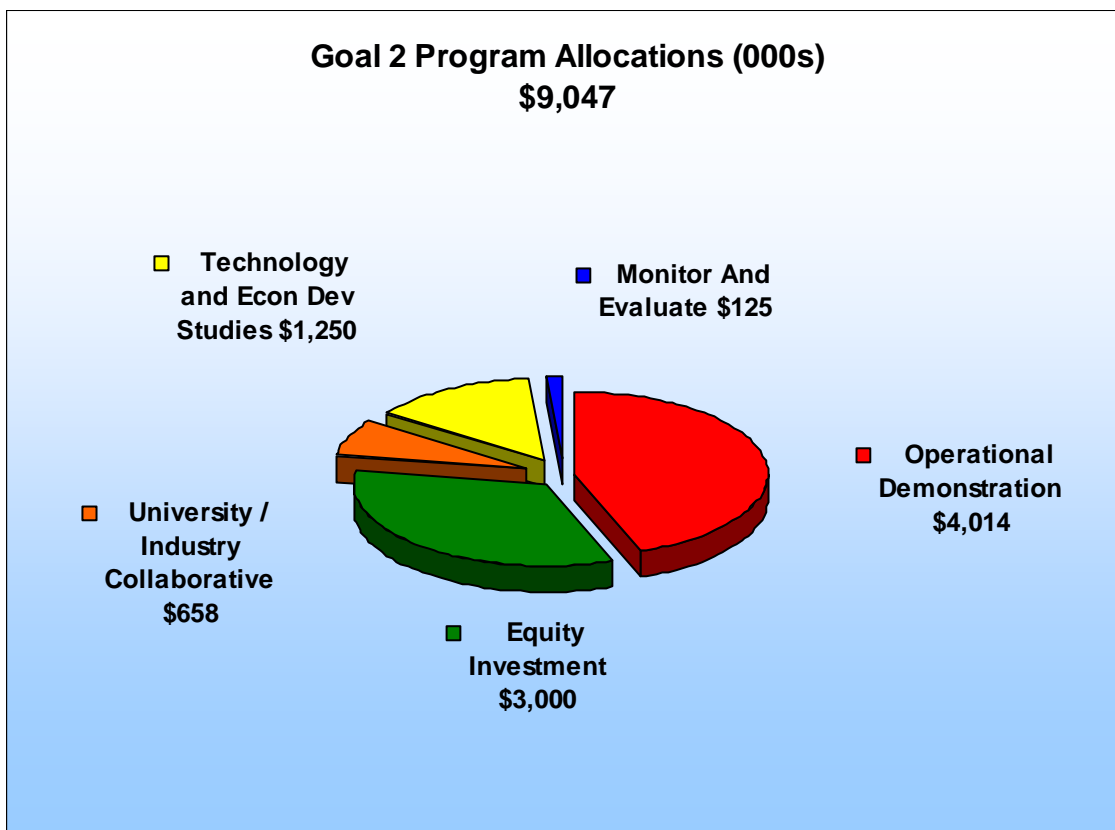
DESCRIPTION In accordance with the CCEF strategic plan, an independent evaluator will be selected to monitor and evaluate performance of Program Goal 2 including progress in meeting Program Goal objectives.

FUNDING \$125,000

Projected Program Allocations Goal 2

For the period FY 2009 – FY 2010

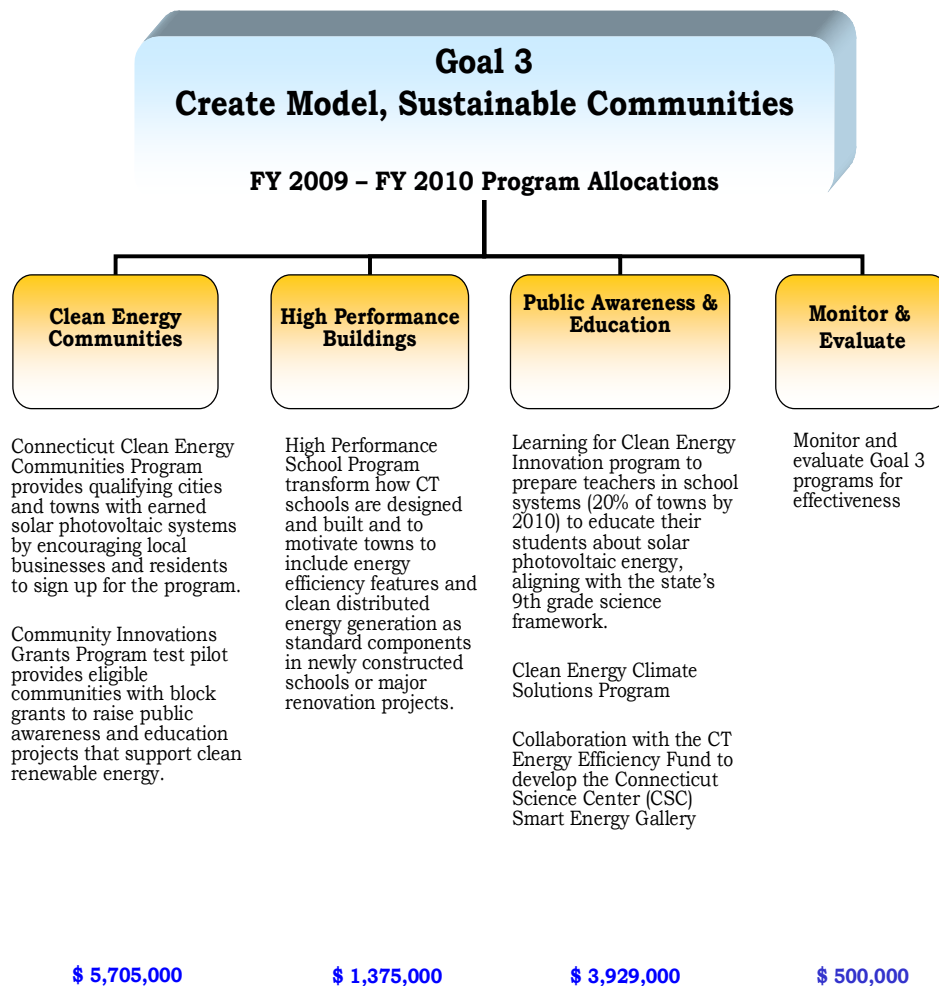
ALLOCATIONS BY PROGRAM (000's)	Estimated Revenues from All Sources FY09–FY10	Available Project Allocations FYE 6/30/08	Estimated Operating Expenses FY09–FY10	Total Projected Allocations FY09–FY10	% of All Programs
Goal 2					
Operational Demonstration Program	310	4,014	(310)	4,014	3.1
Equity Investments	232	3,000	(232)	3,000	2.3
University/Industry Collaborative	51	658	(51)	658	0.5
Technology and Econ Dev Studies	1,097	250	(97)	1,250	1.0
Monitoring and Evaluation Programs	10	125	(10)	125	0.1
Goal 2 Total	1,700	8,047	(700)	9,047	7.1



**PROGRAM GOAL 3 – RENEWABLE ENERGY DEMAND
AND SUSTAINABILITY**

Strategic Objective

***THE CONNECTICUT CLEAN ENERGY FUND WILL INCREASE
THE DEMAND FOR CLEAN ENERGY BY CREATING MODEL,
SUSTAINABLE COMMUNITIES***



Clean Energy Communities Program

DESCRIPTION

The **Connecticut Clean Energy Communities Program – Version 2.0** is a rollout of a successful test-pilot program designed to support voluntary clean energy market development. The program has demonstrated improved performance of residential markets through the CTCleanEnergyOptionssm program and commercial markets through the 20% by 2010 clean energy campaign at the municipal level.

Its purpose is to assist communities and their residents in the purchase and support of clean energy. Already, nearly 40 percent of Connecticut's cities and towns have committed themselves to clean energy campaigns, working toward energy independence and reducing greenhouse gas emissions that contribute to global warming. Under Version 2.0 of this program, cities and towns can qualify as a "Connecticut Clean Energy Community" and earn a 1-kilowatt solar photovoltaic system from the CCEF¹⁶ by completing three steps:

- Commit to the 20% by 2010 clean energy campaign;
- Sign up customers to the CTCleanEnergyOptionssm program. The lesser of:
 - 100 local residential or small business customers;
 - 1 Gigawatt-hour of clean energy demand from a Commercial & Industrial customer;
 - 10 percent of households in a community; or
 - 100 sign-ups in a regional school district.
- Make a municipal clean energy purchase

Qualifying towns must also commit to allocating 100 percent of the electricity savings resulting from the installation of the clean energy system to additional town purchases of clean energy. Towns can earn

¹⁶ The 54 towns in the load-congested zones of Southwest Connecticut can earn a 2 kW system by meeting these requirements.

multiple systems each time they meet a qualifying threshold subject to available program funding. Furthermore, towns can “bank” earned kilowatts or purchase additional kilowatts utilizing other CCEF incentives to install larger PV systems.

Version 2.0 also provides bonus kilowatts of solar PV as “Leadership Rewards” for the first cities and towns to achieve certain milestones, “Achievement Rewards” for municipalities that achieve high threshold targets (i.e., each 2.5 percent of household participation or status as a U.S. Environmental Protection Agency “Green Power Community”) and test-pilot affinity programs.

Each PV system is equipped with data-monitoring software designed by Fat Spaniel that allows students and other individuals to obtain real-time information via the Internet regarding the electricity generated, emissions avoided and costs saved as a result of the system. Furthermore, installations in five Clean Energy Communities will be equipped with enhanced data-monitoring software designed by Heliotronics, Inc., that is integrated with the CCEF’s **Learning for Clean Energy Innovation** program.

The Communities program is supported by a dedicated website that includes general program information; individual town pages that provide the number of CTCleanEnergyOptionssm customers, percentage of household participation, 20% by 2010 campaign progress, recognition of local businesses and institutions that are supporting clean energy, links to monitoring data for local renewable energy systems and local press coverage; and reports and charts prepared by an independent evaluator that measure program progress and performance.

Version 3.0 (currently in development) will continue the same basic components but will also require municipal commitments to achieve specified energy reduction targets. The CCEF is working with the U.S.

EPA and intends to incorporate its **New England Community Energy Challenge** program that provides energy benchmarking software at and technical assistance to participating municipalities free of charge. Version 3.0 will offer similar incentives to qualifying towns, albeit subject to different thresholds and competitive rewards that will be designed to achieve deeper, community-wide support for clean energy.

The CCEF will also develop complementary marketing campaigns that seek to create or expand voluntary demand for clean energy among Connecticut colleges and universities and commercial and industrial customers.

OBJECTIVES

The Connecticut Clean Energy Communities Program – Version 2.0

formed the foundation of the CCEF's voluntary clean energy market strategy in the Strategic Focus for 2004–2007 – namely, to achieve 0.5 percent of the state's electricity consumption from voluntary purchases of clean energy resources. This program, which is ongoing, is further intended to result in a measurable increase in the knowledge and awareness of the benefits and availability of clean energy resources by Connecticut's ratepayers and prepare the next generation of innovators and consumers to address the challenges that society faces in creating a sustainable energy system.

The expected outcomes of this program include:

- Increased residential acquisition for the CTCleanEnergyOptionssm program;
- Opening of new markets for clean energy purchases (i.e., CTCleanEnergyOptionssm, Renewable Energy Certificates and on-site renewable energy systems) by towns participating in the 20% by 2010 campaign;
- Stronger ties between communities and formal and informal education centers working together on clean energy awareness and education;

- Demonstrated environmental and social benefits including but not limited to the reduction of greenhouse gases and contributions to U.S. energy independence through voluntary clean energy purchasing; and
- Reduction of the acquisition cost for CTCleanEnergyOptionssm program customers as compared with other state programs.

The Connecticut Clean Energy Communities Program – Version 3.0

will build upon the success of this program and serve as a catalyst to achieve the CCEF's current goal of achieving 3 percent of the state's electricity consumption from voluntary purchases of clean energy resources by 2010 (which is consistent with the goals of the state's Climate Change Action Plan). The next iteration will seek to accelerate and sustain market growth of the CTCleanEnergyOptionssm program and voluntary support for clean energy among the commercial, industrial and institutional sectors and simultaneously reduce acquisition costs. In addition, the revised program will introduce energy efficiency requirements for participating towns to foster integrated sustainable energy strategies, complement and advance other state energy and climate change programs and goals, save towns money, and ease the financial burden of supporting clean, renewable technologies.

TARGET MARKET Commercial and residential electricity customers in CL&P and UI territories (i.e., municipal governments, businesses, institutions and residential customers).

INCENTIVES Qualifying towns earn solar PV systems and data-monitoring software by meeting the thresholds described above. Under the affinity test-pilot programs, informal educational centers can earn solar PV systems by meeting certain thresholds of participation in the CTCleanEnergyOptionssm program. This program provides further incentives to municipalities including eligibility to participate in the CCEF's **Community Innovation Grants** and **Learning for Clean Energy Innovation** programs.

GOALS

Version 2.0 of the program had the following goals, each of which has been met or is expected to be met (as confirmed by Nexus Market Research [NMR], an independent program evaluator) within the existing funding allocation:

- At least 40 Connecticut cities and towns committed to the 20% by 2010 campaign;
- Up to 25 GWh of voluntary clean energy being purchased by 20% by 2010 towns;
- Up to 200 kW of solar PV installations at a variety of Connecticut cities and towns, as well as informal educational centers; and
- Up to 125 GWh of voluntary clean energy demand through the CTCleanEnergyOptionssm program (equivalent to that of 15,000 households).

Version 3.0 program goals will be developed consistent with the overarching CCEF objectives for Program Goal 3.

FUNDING

\$5,340,000

Community Innovations Grants Program

DESCRIPTION

The **Community Innovations Grants Program** is a test-pilot program that provides eligible communities with a \$5,000 block grant to support local public awareness and education projects that support clean renewable energy.

This program is an amalgamation of several community-based development models including the micro-lending aspects of the Grameen Bank, small project assistance grants of the U.S. Peace Corps and the grass-roots environmental support programs of the New England Grassroots Environmental Fund.

Under the first phase of the program, funding was provided for up to 40 communities that committed to the 20% by 2010 clean energy campaign and established a local clean energy task force (or similar body).

Participating towns were required to attend a workshop where they were trained on managing a micro-grant giving process by soliciting grant applications, selecting project recipients and administering and accounting for grant funds. The clean energy task force may provide individual awards in amounts ranging from \$250 to \$2,000 to organizations or citizens for projects that support clean energy awareness and education within their community. In addition, the task force may use up to \$1,000 for administrative costs incurred in promoting clean energy within the community. Only one individual grant award may be given out by a community at any one time.

To further manage the transaction and accountability risks for the use of these funds, individual grant recipients are required to submit final reports to the task force upon completion of their projects and task forces are required to submit semiannual reports to the CCEF. The semiannual reports require financial accounting, assessment of the relative success

of funded projects and copies of all grant applications, acceptances and final project reports.

Examples of projects funded through this program include compact fluorescent light bulbs given away as an incentive to new CTCleanEnergyOptionssm customers; books and DVDs on clean energy and climate change purchased for a local library; and an awareness campaign by a high school environmental team that went on to win the inaugural Cool It! Climate Challenge Competition.

OBJECTIVES

The **Community Innovations Grant Program** seeks to increase the demand for clean energy and increase the knowledge and awareness of the benefits and availability of clean energy resources by Connecticut ratepayers. The test-pilot phase of this program, which is ongoing, is intended to address the following objectives:

- Support the interests and needs of local Clean Energy Task Forces to promote and coordinate clean energy activities within their communities;
- Provide financial support for local community-based initiatives that will identify new creative approaches toward reaching diverse segments of the population in support of clean energy;
- Increase consumer awareness and knowledge of the benefits of clean energy as evidenced by increases in earned media and positive trends in statewide public opinion polling; and
- Align the goals and objectives between communities and the CCEF.

Version 2.0 of this program will be modified and implemented so as to provide support to additional qualifying communities.

TARGET MARKET Communities throughout Connecticut.

<i>INCENTIVES</i>	Qualifying towns can receive \$5,000 block grants, which can, in turn, help the town to achieve more sign-ups to the CTCleanEnergyOptions sm program and earn solar PV systems under the Connecticut Clean Energy Communities program.
<i>GOALS</i>	At least 100 local clean energy awareness projects funded through Community Innovations Grants Program.
<i>FUNDING</i>	\$365,000

High Performance Schools Program

DESCRIPTION

The **High Performance Schools Program** is a multifaceted effort built on collaboration between various stakeholders responsible for and concerned with the quality of Connecticut schools, the current and future cost they represent to towns and the state as a whole, and the effect they have on children and communities.

The goal of this multiyear endeavor is to leverage resources, expertise and knowledge currently available in order to transform how Connecticut schools are designed and built and to move towns to include high performance features and clean distributed generation as standard components in future schools. The program will be an integrated campaign of policy initiatives, collaborative action, targeted outreach, technical assistance, financing and measurement, evaluation and documentation of results.

The specific components of this program include:

- Contracting with a “Circuit Rider,” an organization that will intervene at the earliest stages of a municipality’s consideration of a major renovation or new school construction project to discuss the need for high performance schools. The CCEF has selected the Institute for Sustainable Energy at Eastern Connecticut State University to fulfill this vital role for the program.
- Providing technical assistance by contracting with an energy engineering firm or firms that will provide consulting services to targeted municipalities that are planning significant investments in major renovation and new school construction projects.
- Providing educational grants to support education and outreach on high performance building design and construction and develop case studies and other marketing materials to reach key

decision-makers about the benefits of high performance schools and renewables.

- Supporting the hiring of a high performance buildings specialist at a strategically important state agency.

OBJECTIVES

The program is intended to directly support CCEF objectives by encouraging renewable projects greater than 10 kW at public schools. Furthermore, by incorporating important concepts such as energy, water and material efficiency, the program will create teaching tools to illustrate a wide variety of important scientific, mathematic and social issues. The program will indirectly help to achieve other goals including voluntary clean energy market development and raising awareness of the benefits of clean energy.

Specific program objectives include:

- Leveraging construction reimbursement policies of the Connecticut Department of Education to support the incremental design and construction costs for high performance schools;
- Educating stakeholders regarding the benefits of high performance, design, construction and operation;
- Instituting a warning system to reach town building committees early in their design process and get them to focus on life-cycle costs rather than first costs;
- Targeting at least two but no more than five Connecticut cities, towns or regional school districts to develop and adopt comprehensive high performance school construction plans;
- Facilitating design and construction of all new schools to LEED Silver or equivalent standard; and
- Installing clean energy systems in a minimum of 50 percent of new schools built or major renovation projects supported by the state.

TARGET MARKET	Municipalities and school districts within CL&P and UI service territories that are planning new school construction or renovation of existing buildings.
INCENTIVES	This program provides educational and technical services to municipalities and school districts. It is intended to be augmented by the CCEF's funding support for on-site renewable distributed generation systems, reimbursement grants offered by the Connecticut Department of Education, and incentive programs offered by the Connecticut Energy Efficiency Fund and other sources.
GOALS	<p>Complete design and commencement of construction of 15 new or renovated high performance school buildings that have incorporated solar or other renewable technologies.</p> <p>Prepare case studies of three high performance schools (including a mix of secondary and elementary schools, urban and rural settings, and new construction and major renovations).</p>
FUNDING	\$1,375,000
FUTURE PROGRAMS	The CCEF will, in conjunction with the Connecticut Energy Efficiency Fund, promote the adoption of high performance building standards by creating a booklet for residential customers on passive solar, solar photovoltaic, solar thermal and other energy efficient design features. In addition, the CCEF will work with stakeholders to encourage high performance buildings in the municipal government and commercial sectors.

Learning for Clean Energy Innovation Program

DESCRIPTION The **Learning for Clean Energy Innovation Program** ("LCEI Program") is a professional development opportunity for Connecticut teachers focused on renewable energy sources. Developed in consultation with the Connecticut Department of Education and a Professional Development Working Group consisting of education experts and the National Renewable Energy Laboratory, the test-pilot phase of this program offers solar energy lessons that are aligned with the ninth-grade Connecticut Core Science Curriculum Framework. The program will provide education for teachers in qualifying towns on how to incorporate specially designed alternative energy lessons into their existing curriculum. The solar energy unit also utilizes a data-monitoring system developed to link solar arrays on school buildings located in certain "Connecticut Clean Energy Communities." Ultimately, the program will provide teacher training workshops, necessary curriculum materials for educators to use in their classrooms, and a Clean Energy classroom toolkit. Subsequent phases of this program will offer education on wind energy and hydrogen fuel cells.

OBJECTIVES The CCEF school-based solar energy education initiative intends to achieve the following results:

- Provide resources to support educators and students to achieve the Connecticut ninth-grade core science framework standards that address alternative energy sources.
- Provide adequate resources to educators to increase the knowledge and awareness of solar energy technology and its benefits to society among their students.
- Prepare for other clean renewable energy technologies such as hydrogen fuel cell and wind energy to be included within the program as they are also included in the state's core science framework.

- Incorporate Clean Energy Communities PV installation systems as part of the teachers' education tools and field trip opportunities.
- Apply Heliotronics, Inc., data-monitoring system in the classroom as a teaching tool.
- Benefit schools located in towns committed to the 20% by 2010 clean energy campaign, as well as an incentive to other communities considering making the commitment to the campaign.
- Expand the use of curriculum to all municipalities through partnerships with Regional Education Centers and existing energy education organizations.

TARGET MARKET Educators, particularly ninth-grade teachers, selected from towns that have joined the 20% by 2010 campaign and their students.

INCENTIVES This program provides qualifying towns with enhanced curriculum materials tied to the ninth-grade state core science framework including special data-monitoring systems linked to PV installations as well as a take-home clean energy toolkit for students. The program will also work to broaden access of the curriculum lesson plans to ninth-grade science teachers through the state.

Teachers who participate in the training workshop receive Continuing Education Credits ("CEUs") and a \$100 stipend.

GOALS The program will provide training workshops, curriculum materials and toolkit materials for up to 100 teachers from participating towns. In addition, the CCEF seeks to achieve at least one newspaper article per participating town with regard to the workshops, curriculum or other issues surrounding clean renewable energy awareness and education. Finally, the program has an indirect goal of acquiring enrollments in the CTCleanEnergyOptionssm program of at least 2 percent of the parents or guardians of students in participating towns.

FUNDING \$611,000

Clean Energy Climate Solutions Program

DESCRIPTION

The Clean Energy Climate Solutions ("CECS") program is an initiative aimed at testing, evaluating and adapting educational materials that will teach Connecticut residents about clean energy as an important solution to climate change. The project will be performed by the Connecticut Science Center Collaborative ("CSCC") and managed by Clean Air – Cool Planet ("CA-CP"), a 501(c)3 nonprofit organization. The CCEF investment in this program is leveraged with philanthropic community funding including the Emily Hall Tremain Foundation.

The CECS program intends to create a network of exhibits, programs and activities that will involve 10 informal education centers initially¹⁷ that receive collectively approximately 2 million visitors per year. If successful, the program will be expanded to 20 or more centers by the end of the final project term. This project is intended to create a "hub-and-spoke" network among these centers, along with the Connecticut Science Center, in an effort to educate Connecticut residents about the solutions offered by clean renewable energy on the issue of climate change.

OBJECTIVES

The CECS program expects to address the following objectives:

- Address energy as fundamental to society
- Draw the connection between unsustainable energy sources and climate change as well as clean energy as a solution
- Assist residents in understanding clean energy technology science and history

¹⁷ The informal education centers participating in the test-pilot phase include Beardsley Zoo (Bridgeport), Connecticut Audubon Society (Fairfield), The Children's Museum (formerly the Science Center of Connecticut) (West Hartford), Dinosaur State Park (Rocky Hill), Discovery Science Museum and Planetarium (Bridgeport), Eli Whitney Museum (Hamden), Garbage and Trash Museum (Hartford and Stratford), Stepping Stones Museum (Norwalk), Talcott Mountain Science Center (Avon) and Yale Peabody Museum (New Haven).

- Demonstrate that clean energy is beneficial to society and a reliable source of energy

Through this program, the CCEF anticipates that Science Center members and trustees will play a strategic leadership role in disseminating information and influencing public opinion related to climate change and clean, renewable energy. Furthermore, it is expected that these programs will result in long-term market transformations by engaging visitors to learn about and take action on clean energy as a significant solution to addressing climate change. The expectation is that as the general public becomes more knowledgeable about clean energy, they will make more informed energy purchase decisions and support the clean energy industry.

TARGET MARKET The target audience is families, educators and students attending Connecticut Science Center Collaborative member centers for general and specific programs. The CECS program is open to all municipalities and school districts through the Connecticut Science Center Collaborative.

INCENTIVE The CECS program intends to create a network of exhibits, programs and activities using off-the-shelf educational materials on clean renewable energy technologies at participating science centers.

GOALS This program seeks to reach approximately 5 percent of the visitors (approximately 100,000 people) from the participating centers each year. Furthermore, it is anticipated that there will be two to four earned media deliverables per participating informal education center each year focusing on clean energy as the solution to climate change. Finally, the CCEF expects to influence at least 1 percent of the visitors (500 people) to enroll as customers in the CTCleanEnergyOptionssm program.

FUNDING \$325,000

Connecticut Science Center – Smart Energy Gallery

DESCRIPTION The Connecticut Clean Energy Fund (CCEF) and the Connecticut Energy Efficiency Fund ("CEEF") are in partnership to showcase the science of clean energy generation and energy efficiency and conservation at the Connecticut Science Center that is expected to open in Hartford in 2008. The Smart Energy Gallery will be a 1,500-square-foot exhibit area focused on the themes of clean and efficient energy sources while furthering the core science framework standards in Connecticut schools.

The CCEF anticipates that the Smart Energy Gallery will bring attention to the science center facility itself as a "building that teaches." Furthermore, it will allow visitors to create, observe, record, experiment and understand the power of clean renewable energy and offer tangible solutions that visitors can implement in their own lives. The exhibit will also recognize Connecticut as a national leader in the production and use of clean energy and energy conservation.

OBJECTIVES The program expects to achieve the following objectives:

- Address energy as fundamental to society, powering our homes, businesses and industries;
- Address unsustainable energy sources that are not clean, that create waste and result in environmental degradation;
- Raise awareness of solutions that consumers can choose and encourage the development of new power sources that have different impacts on our environment and economy; and
- Portray clean energy as beneficial to society, available and reliable.

TARGET MARKET The target audience is the estimated 450,000 visitors who will attend the Connecticut Science Center annually. This figure includes an estimated

85,000 Kindergarten–Grade 12 students who will participate in field trips to the Center each year.

INCENTIVE

This program will provide funding for the design, construction and maintenance of a 1,500-square-foot state-of-the-art museum gallery, including a theater that will be situated on an upper-level concourse.

GOALS

The CCEF anticipates that these programs will be long-term market transformation initiatives that engage teachers and students to learn about and become inspired by clean energy. The expectation is that as the general public becomes more knowledgeable about clean energy, they will make more-informed energy purchase decisions, supporting the clean energy industry.

FUNDING

\$2,993,000

***FUTURE
PROGRAMS***

The CCEF will develop additional education and outreach programs to stimulate the voluntary market for clean energy. Potential programs under consideration include an interactive clean energy kiosk, expansion of formal or informal clean energy and climate change curriculum or exhibits and community-based initiatives designed to promote sustainable living.

Monitoring and Evaluation

DESCRIPTION

The Monitoring & Evaluation (“M&E”) program for the CCEF’s Program Goal 3 was designed with assistance from the National Renewable Energy Laboratory, Lawrence Berkeley National Laboratory, U.S. Environmental Protection Agency, Clean Energy States Alliance, Massachusetts Renewable Energy Trust, Rhode Island Renewable Energy Fund, CT Department of Public Utility Control, CT Office of Policy and Management, and CT Department of Environmental Protection. Following a competitive RFP process, Nexus Market Research (“NMR”) was identified as a subcontractor for this program and was tasked to conduct a comprehensive program analysis and develop an M&E plan.

The M&E program has examined the progress of various Program Goal 3 programs to determine whether the CCEF has achieved two strategic objectives:

1. **Objective 3A (“Voluntary Market Demand”)** – 0.5 percent of electricity demand will come from voluntary purchases of clean energy resources.
2. **Objective 3B (“Public Awareness”)** – Drawing from a baseline survey, there will be a significant increase in the knowledge and awareness of the benefits and availability of clean energy resources.

In connection with the M&E program, NMR performed or commissioned various analytical studies including a Program Logic Model, a “Delphi analysis,” an Investment Analysis and a Baseline Survey of Consumer Awareness of Clean Energy in Connecticut. These reports helped to identify performance indicators, metrics and measurement of Goal 3 programs.

With respect to Objective 3A, NMR collects and analyzes data from the CTCleanEnergyOptionssm suppliers, the electric distribution companies and other sources to generate monthly spreadsheet reports including customer enrollments by municipality, household participation rates and kilowatt hours of demand. The monthly reports serve as the basis for updates to the CCEF's Clean Energy Communities website and track qualifications for awards under that program. NMR also prepares quarterly scorecard reports and an annual program analysis report, which includes a comprehensive assessment of sign-up indicators.

With respect to Objective 3B, NMR conducts quarterly telephone surveys of Connecticut electric ratepayers and an annual national survey of homeowners to assess current levels of public awareness and knowledge of clean energy in Connecticut and across the country. NMR also monitors paid and earned media (including newspaper, magazine, television and radio) and public presentations and events relating to clean energy in Connecticut.

The findings of these studies are presented in annual Comparative Assessment of Consumer Awareness reports and Media Activity Assessments.

In addition to the foregoing, the M&E program will also evaluate the Community Innovations Grants and Learning for Clean Energy Innovation programs and will coordinate with Clean Air – Cool Planet's contractor with respect to the Clean Energy Climate Solutions program.

Reports prepared by NMR for Goal 3 programs are posted on the "Program Progress" page of the Communities website or are available from the CCEF.

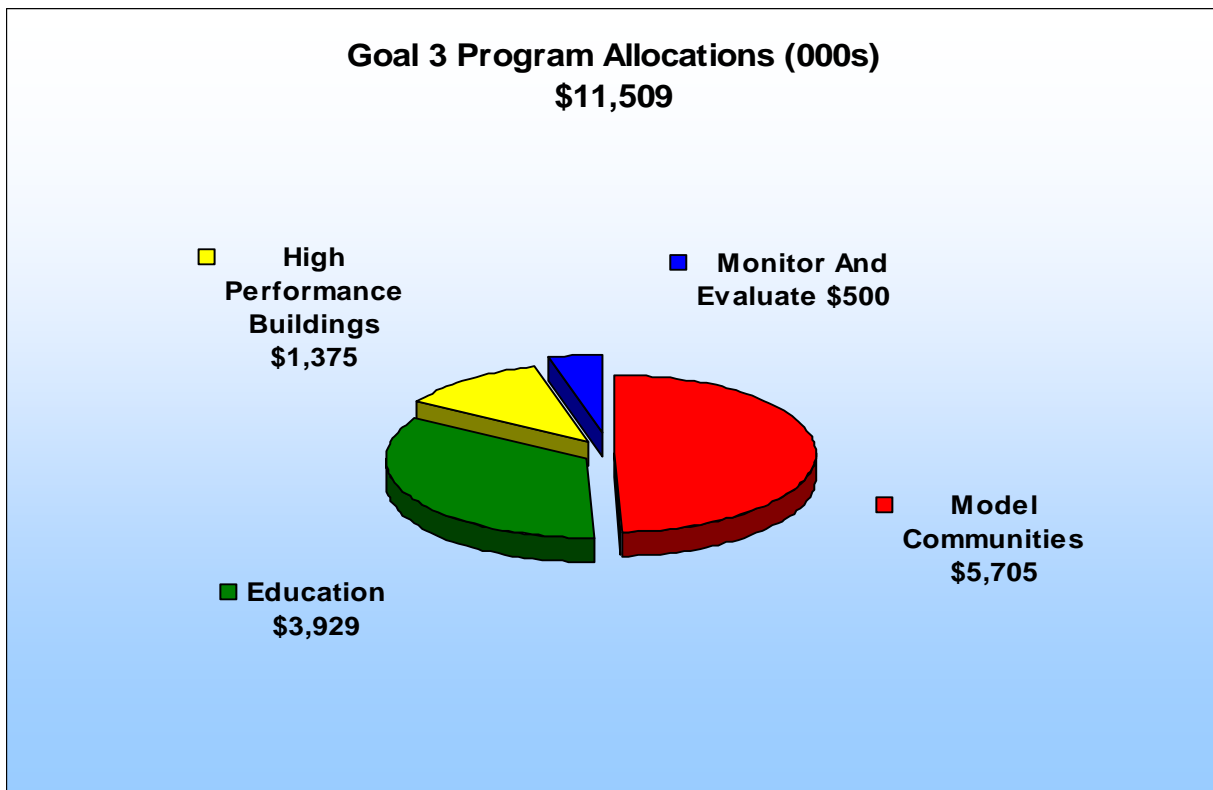
FUNDING

\$500,000

Projected Program Allocations Goal 3

For the period FY 2009 – FY 2010

ALLOCATIONS BY PROGRAM (000's)	Estimated Revenues from All Sources FY09–FY10	Available Project Allocations FYE 6/30/08	Estimated Operating Expenses FY09–FY10	Total Projected Allocations FY09–FY10	% of All Programs
Goal 3					
Clean Energy (CE) Communities Prog	4,253	1,500	(413)	5,340	4.2
Community Innovation Grant Prog	281	112	(28)	365	0.3
Learning for CE Innovation Ed Prog	407	251	(47)	611	0.5
High Performance Schools Program	106	1,375	(106)	1,375	1.1
Climate Solutions Program	350	-	(25)	325	0.3
CT Science Center	646	-	(46)	600	0.5
New Education and Outreach Programs	1,835	743	(185)	2,393	1.9
Monitoring and Evaluation Programs	339	200	(39)	500	0.4
Goal 3 Total	8,217	4,181	(889)	11,509	9.0



ALL PROGRAM GOALS – NEW OPPORTUNITIES

Strategic Objective

THE CONNECTICUT CLEAN ENERGY FUND WILL POSITION ITSELF TO QUICKLY MOBILIZE RESOURCES TO ENSURE THAT NEW OPPORTUNITIES ARE EVALUATED AND ADDRESSED THAT WILL FURTHER THE GOAL OF ATTAINING A SUSTAINABLE BALANCE OF ENERGY PRODUCTION, ECONOMIC GROWTH AND ENVIRONMENTAL IMPACT

Because the renewable energy marketplace is extremely dynamic, the New Opportunities Program sets funding aside for program and project opportunities that we cannot foresee today but could arise within the next two years. For instance, since the original draft of this document, issues have been raised surrounding RPS compliance that could require new programmatic solutions on the part of CCEF. Another example is legislatively mandated studies or programs that may arise from both the 2008 and the 2009 legislative sessions.

Renewable Portfolio Standard Compliance

BACKGROUND

Conn. Gen. Stat. 16-245a of the Conn. Gen. Stat., as amended by P.A. 07-242, requires the electric distribution companies (“EDCs”) and suppliers to demonstrate that certain percentages of their total services (kWh sales) or supply are being generated from Class I renewable energy sources.

The RPS obligation percentages are as follows: 2007, 3.5%; 2008, 5.0%; 2009, 6.0%; 2010, 7.0%; 2011, 8.0%; 2012, 9.0%; 2013, 10.0%; 2014, 11.0%; 2015, 12.5%; 2016, 14.0%; 2017, 15.5%; 2018, 17.0%; 2019, 19.5%; and 2020, 20.0%.

The EDCs can comply with the RPS requirement by:

- (1) Purchasing generation from eligible sources in Connecticut or in ISO-NE for physical delivery to Connecticut customers, bundled with renewable energy credits (“RECs”) that the source generates (bundled compliance);
- (2) Purchasing RECs from generators that can physically deliver eligible renewable electric power into ISO-NE, but who sell the renewable attribute separately from the energy produced (REC compliance); or

- (3) Satisfying the RPS or any deficiencies by making payments for the RECs equal to Connecticut's REC price, which is capped at \$55/MWh (This payment is commonly called the Alternative Compliance Payment, or ACP).

Conn. Gen. Stat. § 16-244c(j)(1) requires all ACPs in lieu of meeting the RPS to be deposited with the CCEF to promote Class I renewable sources. Under Section Conn. Gen. Stat. 16-245a and § 16-245a-1(a) of the Regulations of State Agencies, the DPUC implements RPS compliance and conducts an evidentiary proceeding annually to review RPS compliance and determine ACPs if any.

Section 51 of Public Act 07-242 required the EDCs to prepare and submit a Comprehensive Resource Plan to the Connecticut Energy Advisory Board ("CEAB") for its review and referral to the Department of Public Utility Control ("Department"). The EDCs submitted a proposed Comprehensive Resource Plan to the CEAB on January 1, 2008, and made a presentation regarding the Comprehensive Resource Plan to the CEAB at a public meeting on January 4, 2008. Although disputed by the CCEF and under review by the CEAB at the time of this FY 2009 – FY 2010 Comprehensive Plan, the Comprehensive Resource Plan indicated very large deficiencies by the EDCs in meeting their RPS obligations in the near future resulting in very large ACPs at the capped price of \$55/MW hr.

OBJECTIVE

For the CCEF to be an active stakeholder in the CEAB process and to work collaboratively with the CEAB and the EDCs to assist in preparing a Modified Comprehensive Resource Plan, which the CCEF believes will more accurately reflect the state of the renewable market in Connecticut.

For the CCEF to position itself to work collaboratively with the CEAB, Department, and the EDCs to possibly develop a renewable solicitation or other solution, to be conducted by the CCEF for large-scale renewable resources to help ensure that the EDCs meet their RPS obligations and

to prevent the need to make any large ACPs for noncompliance with, or in lieu of, meeting the RPS requirements, thus saving ratepayer monies and producing renewable energy.

FUNDING

TBD

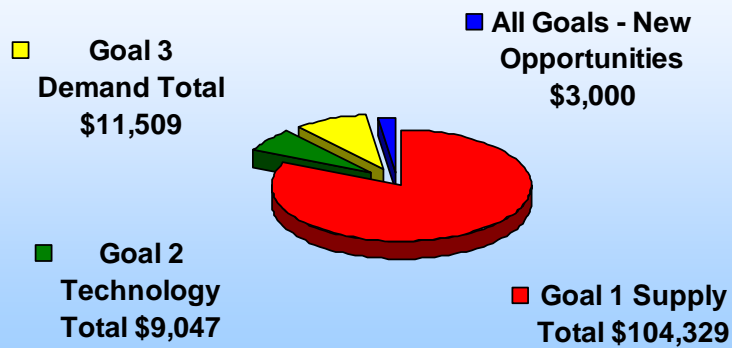
New Legislatively Mandated Programs and Initiatives

<i>BACKGROUND</i>	The Connecticut legislature was in session at the time of this FY 2009 – FY 2010 Comprehensive Plan submission to the DPUC. Based on certain proposed bills outstanding, the CCEF anticipates that some new laws may be promulgated mandating the CCEF to implement new programs and/or conduct renewable related studies that are not contemplated in this FY 2009 – FY 2010 Comprehensive Plan at the time of its submittal to the Department.
<i>OBJECTIVE</i>	For the CCEF to be positioned to quickly respond to any new legislatively mandated programs and/or studies by reserving a fraction of its funding for these purposes.
<i>FUNDING</i>	TBD

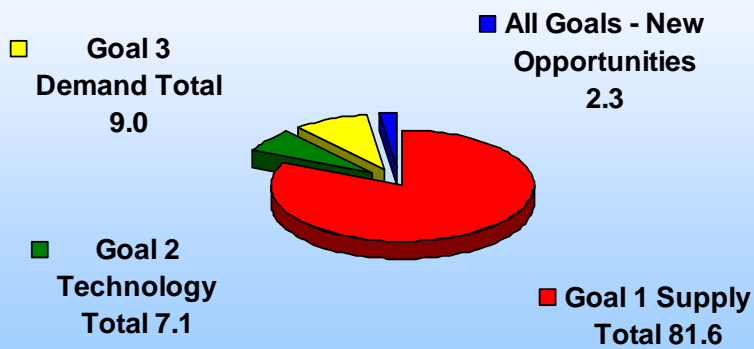
FY 2009 – FY 2010 Comprehensive Plan Program Allocations for all Program Goals

ALLOCATIONS BY PROGRAM (000's)	Estimated Revenues from All Sources FY09–FY10	Available Project Allocations FYE 6/30/08	Estimated Operating Expenses FY09–FY10	Total Projected Allocations FY09–FY10	% of All Programs
Goal 1					
Project 150	\$ 5,387	\$ -	\$ (387)	\$ 5,000	3.9
Pre-Development	1,362	202	(112)	1,452	1.1
Comm. Solar/For Profit	16,684	6,769	(1,684)	21,769	17.0
Comm. Solar/Not for Profit/Govt	10,970	2,547	(970)	12,547	9.8
Res/Small Solar Rebate Program	3,253	4,928	(587)	7,594	5.9
Solar PV Lease Program	1,011	13,078	(1,011)	13,078	10.2
Solar PV Lease Prog Rebate Comp	1,268	16,400	(1,268)	16,400	12.8
Affordable Housing DG Pilot Prog	2,190	453	(190)	2,453	1.9
Fuel Cell	7,293	10,716	(1,293)	16,716	13.1
Other Technologies	4,490	2,330	(490)	6,330	4.9
Feasibility Studies	34	436	(34)	436	0.3
Monitoring and Evaluation Programs	43	554	(43)	554	0.4
Goal 1 Total	53,985	58,413	(8,069)	104,329	81.6
Goal 2					
Operational Demonstration Program	310	4,014	(310)	4,014	3.1
Equity Investments	232	3,000	(232)	3,000	2.3
University/Industry Collaborative	51	658	(51)	658	0.5
Technology and Econ Dev Studies	1,097	250	(97)	1,250	1.0
Monitoring and Evaluation Programs	10	125	(10)	125	0.1
Goal 2 Total	1,700	8,047	(700)	9,047	7.1
Goal 3					
Clean Energy (CE) Communities Prog	4,253	1,500	(413)	5,340	4.2
Community Innovation Grant Prog	281	112	(28)	365	0.3
Learning for CE Innovation Ed Prog	407	251	(47)	611	0.5
High Performance Schools Program	106	1,375	(106)	1,375	1.1
Climate Solutions Program	350	-	(25)	325	0.3
CT Science Center	646	-	(46)	600	0.5
New Education and Outreach Programs	1,835	743	(185)	2,393	1.9
Monitoring and Evaluation Programs	339	200	(39)	500	0.4
Goal 3 Total	8,217	4,181	(889)	11,509	9.0
All Goals - New Opportunities	2,732	500	(232)	3,000	2.3
Projected Current and Future Budget Allocations - All Programs	\$ 66,634	\$ 71,141	\$ (9,890)	\$ 127,885	100.0

CCEF Program Allocations for FY 2009-2010
All Goals - Total Dollars (000s)
\$127,885



CCEF Program Allocations for FY 2009-2010
All Goals by %



CCEF Board Resolution
Approving the
FY 2009 - FY 2010 Comprehensive Plan

RESOLVED:

- (1) that in accordance with the General Statutes of Connecticut § 16-245n(d), the Board of Directors of the Connecticut Clean Energy Fund (“CCEF Board”) approves the comprehensive plan for the implementation of renewable energy programs and expenditures during the July 1, 2008, through June 30, 2010 period (“FY 2009 – FY 2010 Comprehensive Plan”) with the necessary conforming changes; and
- (2) that Peter Longo, President and Executive Director of Connecticut Innovations, Inc. (“CI”), Lise Dondy, Vice President of CI and President of the Connecticut Clean Energy Fund (“CCEF”), are authorized to direct legal counsel to execute and deliver for, and on the behalf of the CCEF and the CCEF Board, the FY 2009 – FY 2010 Comprehensive Plan to the Department of Public Utility Control (“Department”) and advocate on behalf of the FY 2009 – FY 2010 Comprehensive Plan in the Department’s proceeding to approve, approve with amendments, or deny the FY 2009 – FY 2010 Comprehensive Plan.

Appendix

Public Comment Summary Matrix

Public Hearing Oral Comments

Written Comments Submitted